



FCC PART 15 TEST REPORT No.I20Z60705-IOT04

for

Client Name: TCL Communication Ltd.

Product Name: Tablet PC

Model Name: 9048S,9049L

With

FCC ID: 2ACCJB126

Hardware Version: 02

Software Version: 6F6A

Issued Date: 2020-09-11

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:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60705-IOT04	Rev.0	1st edition	2020-06-24
I20Z60705-IOT04	Rev.1	2 nd edition Update HW version and model name.	2020-09-11

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1. TEST LABORATORY

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 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 (CN0066). 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

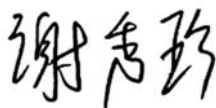
1.3. Testing Environment

Normal Temperature: 15-25°C
Relative Humidity: 20-75%

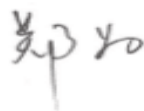
1.4. Project date

Testing Start Date: 2020-05-11
Testing End Date: 2020-06-24

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: TCL Communication Ltd.
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City: Hong Kong
Postal Code: /
Country: China
Telephone: 0086-755-36611722
Fax: 0086-755-36612000-81722

2.2 Manufacturer Information

Company Name: TCL Communication Ltd.
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science
Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
Telephone: 0086-755-36611722
Fax: 0086-755-36612000-81722

3. EQUIPMENT UNDER TEST (EUT) AND

ANCILLARY EQUIPMENT (AE)

3.1. About EUT

Description	Tablet PC
Model name	9048S,9049L
FCC ID	2ACCJB126
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
EUT1	015759000002893	02	6F6A
EUT2	015759000002448	02	6F6A

*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	SN
AE1	Battery	/

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

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

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

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/matrix manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26°C
Voltage	3.85V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2021-05-06
2	LISN	ENV216	101200	Rohde & Schwarz	1 year	2021-05-17
3	Test Receiver	ESCI 7	100344	Rohde & Schwarz	1 year	2021-02-26
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100235	Rohde & Schwarz	1 year	2021-03-03
2	BiLog Antenna	VULB9163	483	Schwarzbeck	1 years	2020-09-17
3	Dual-Ridge Waveguide Horn Antenna	3115	6914	ETS-Lindgren	1 years	2021-01-14

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)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.86
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.26
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.28

8.6 AC Powerline Conducted Emission

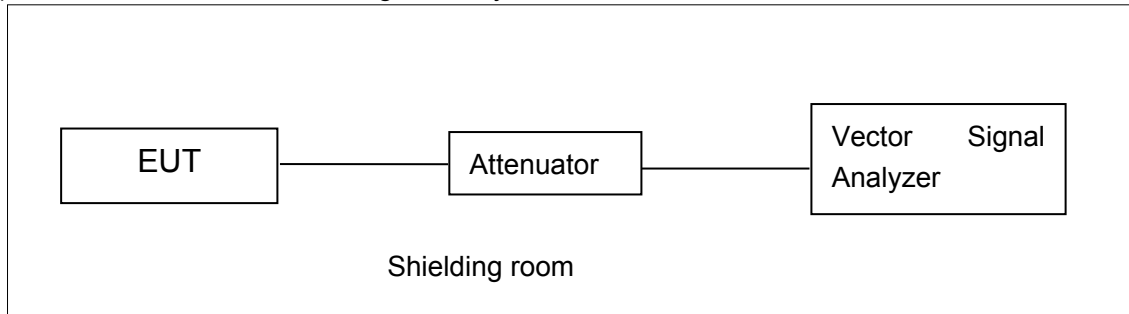
Measurement Uncertainty: 3.38dB, k=2.

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

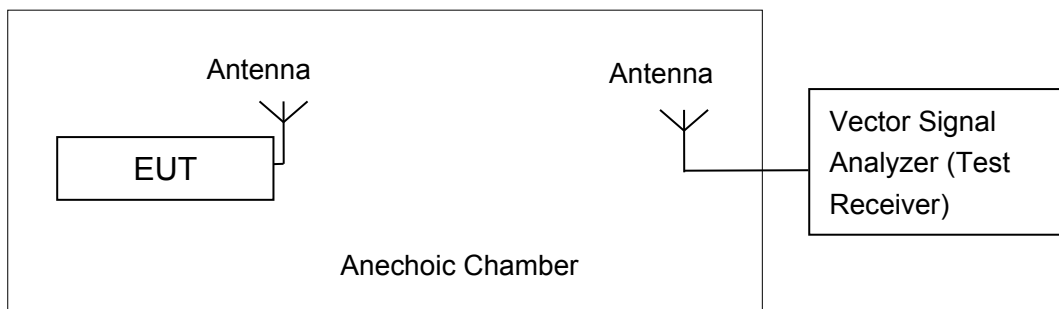


A.1.2. Radiated Emission Measurements

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 measurement method SA-2 is made according to KDB 789033

Duty Cycle

11a	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps		
Duty Cycle	0.99	0.99	0.99	0.98	0.99	0.98	0.98	0.98		
11n-20	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7		
Duty Cycle	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98		
11n-40	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7		
Duty Cycle	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96		
11ac-20	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	
Duty Cycle	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98	
11ac-40	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Duty Cycle	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95
11ac-80	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
Duty Cycle	0.99	0.98	0.98	0.97	0.95	0.94	0.94	0.93	0.92	0.91

Measurement Results:

802.11a mode

Mode	Frequency	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz	/	/	/	18.17	/	/	/	/
	5200MHz	/	/	/	18.01	/	/	/	/
	5240MHz	/	/	/	17.12	/	/	/	/
	5260MHz	/	/	/	17.51	/	/	/	/
	5280MHz	/	/	/	17.21	/	/	/	/
	5320MHz	17.87	17.16	17.13	18.76	18.53	16.76	16.18	16.15
	5500MHz	/	/	/	17.81	/	/	/	/
	5580MHz	/	/	/	17.40	/	/	/	/
	5700MHz	/	/	/	19.66	/	/	/	/

The data rate 18Mbps 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	16.41	17.02	17.84	17.80	17.19	17.18	16.18	16.12
	5200MHz	/	/	17.20	/	/	/	/	/
	5240MHz	/	/	17.36	/	/	/	/	/
	5260MHz	/	/	18.02	/	/	/	/	/
	5280MHz	/	/	17.51	/	/	/	/	/
	5320MHz	/	/	17.25	/	/	/	/	/
	5500MHz	/	/	16.47	/	/	/	/	/
	5580MHz	/	/	16.89	/	/	/	/	/
5700MHz	/	/	17.81	/	/	/	/	/	

The data rate MCS2 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	17.13	16.98	17.84	17.80	17.14	17.13	16.12	16.07	15.25
	5200MHz	/	/	17.16	/	/	/	/	/	/
	5240MHz	/	/	17.84	/	/	/	/	/	/
	5260MHz	/	/	17.85	/	/	/	/	/	/
	5280MHz	/	/	17.43	/	/	/	/	/	/
	5320MHz	/	/	17.00	/	/	/	/	/	/
	5500MHz	/	/	16.42	/	/	/	/	/	/
	5580MHz	/	/	16.69	/	/	/	/	/	/
	5700MHz	/	/	17.80	/	/	/	/	/	/

The data rate MCS2 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	17.64	17.19	17.06	16.98	16.49	16.45	15.62	15.60
	5230MHz	17.57	/	/	/	/	/	/	/
	5270MHz	17.52	/	/	/	/	/	/	/
	5310MHz	16.93	/	/	/	/	/	/	/
	5510MHz	16.00	/	/	/	/	/	/	/

	5550MHz	16.06	/	/	/	/	/	/	/	/
	5670MHz	17.33	/	/	/	/	/	/	/	/

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	17.65	17.18	17.11	17.04	16.37	16.47	15.61	15.61	13.83	13.77
	5230MHz	17.57	/	/	/	/	/	/	/	/	/
	5270MHz	17.56	/	/	/	/	/	/	/	/	/
	5310MHz	16.95	/	/	/	/	/	/	/	/	/
	5510MHz	16.05	/	/	/	/	/	/	/	/	/
	5550MHz	16.09	/	/	/	/	/	/	/	/	/
	5670MHz	17.28	/	/	/	/	/	/	/	/	/

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	17.31	16.45	16.56	16.54	15.81	15.76	15.12	15.14	13.26	13.23
	5290MHz	16.99	/	/	/	/	/	/	/	/	/
	5530MHz	15.95	/	/	/	/	/	/	/	/	/
	5610MHz	16.79	/	/	/	/	/	/	/	/	/

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

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	7.47	P
	5200 MHz	8.02	P
	5240 MHz	7.73	P
	5260 MHz	7.43	P
	5280 MHz	7.29	P
	5320 MHz	7.02	P
	5500 MHz	5.77	P
	5580 MHz	6.74	P
	5700 MHz	8.57	P
802.11n HT20	5180 MHz	6.78	P
	5200 MHz	6.72	P
	5240 MHz	6.49	P
	5260 MHz	6.21	P
	5280 MHz	5.98	P
	5320 MHz	5.66	P
	5500 MHz	4.33	P
	5580 MHz	4.53	P
	5700 MHz	7.24	P
802.11ac HT20	5180 MHz	6.80	P
	5200 MHz	6.72	P
	5240 MHz	6.49	P
	5260 MHz	6.22	P
	5280 MHz	5.98	P
	5320 MHz	4.94	P
	5500 MHz	4.95	P
	5580 MHz	4.58	P
	5700 MHz	7.25	P
802.11n HT40	5190 MHz	3.38	P
	5230 MHz	3.21	P
	5270 MHz	2.85	P
	5310 MHz	2.53	P

	5510 MHz	0.81	P
	5550 MHz	1.06	P
	5670 MHz	3.60	P
802.11ac HT40	5190 MHz	3.37	P
	5230 MHz	3.16	P
	5270 MHz	2.84	P
	5310 MHz	2.49	P
	5510 MHz	1.58	P
	5550 MHz	1.59	P
	5670 MHz	3.60	P
802.11ac HT80	5210MHz	0.03	P
	5290MHz	-0.71	P
	5530MHz	-1.67	P
	5610MHz	-0.70	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
		Fig.	Value	
802.11a	5180 MHz	Fig.1	23.35	P
	5200 MHz	Fig.2	25.65	P
	5240 MHz	Fig.3	25.20	P
	5260 MHz	Fig.4	23.40	P
	5280 MHz	Fig.5	22.85	P
	5320 MHz	Fig.6	23.20	P
	5500 MHz	Fig.7	22.85	P
	5580 MHz	Fig.8	22.90	P
	5700 MHz	Fig.9	23.20	P
802.11n HT20	5180 MHz	Fig.10	25.70	P
	5200 MHz	Fig.11	25.25	P
	5240 MHz	Fig.12	25.80	P
	5260 MHz	Fig.13	26.25	P
	5280 MHz	Fig.14	25.85	P
	5320 MHz	Fig.15	25.70	P
	5500 MHz	Fig.16	25.95	P
	5580 MHz	Fig.17	24.35	P
	5700 MHz	Fig.18	24.60	P

802.11ac HT20	5180 MHz	Fig.19	25.80	P
	5200 MHz	Fig.20	25.95	P
	5240 MHz	Fig.21	25.75	P
	5260 MHz	Fig.22	25.25	P
	5280 MHz	Fig.23	25.55	P
	5320 MHz	Fig.24	25.40	P
	5500 MHz	Fig.25	25.00	P
	5580 MHz	Fig.26	24.70	P
	5700 MHz	Fig.27	24.60	P

802.11n HT40	5190 MHz	Fig.28	42.16	P
	5230 MHz	Fig.29	42.16	P
	5270 MHz	Fig.30	41.60	P
	5310 MHz	Fig.31	42.00	P
	5510 MHz	Fig.32	41.76	P
	5550 MHz	Fig.33	41.84	P
	5670 MHz	Fig.34	41.68	P

802.11ac HT40	5190 MHz	Fig.35	42.24	P
	5230 MHz	Fig.36	41.76	P
	5270 MHz	Fig.37	42.08	P
	5310 MHz	Fig.38	42.08	P
	5510 MHz	Fig.39	41.76	P
	5550 MHz	Fig.40	41.76	P
	5670 MHz	Fig.41	42.08	P

802.11ac HT80	5210MHz	Fig.42	99.04	P
	5290MHz	Fig.43	96.32	P
	5530MHz	Fig.44	85.76	P
	5610MHz	Fig.45	90.88	P

Conclusion: PASS
Test graphs as below:

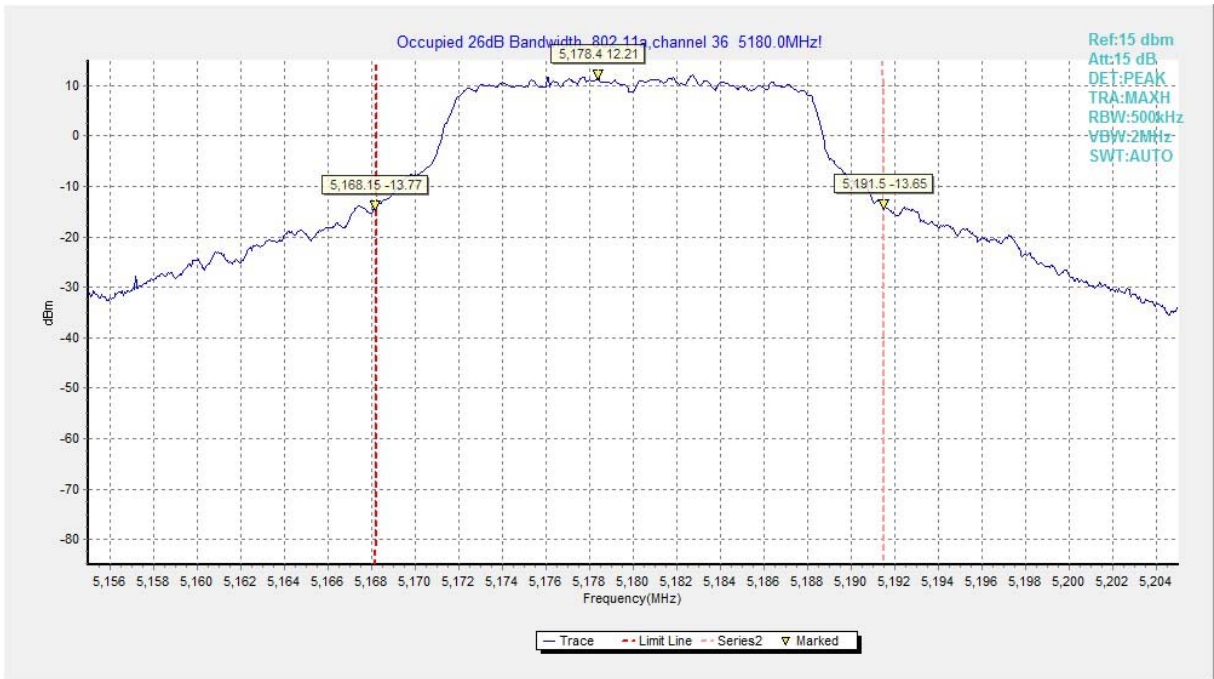


Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

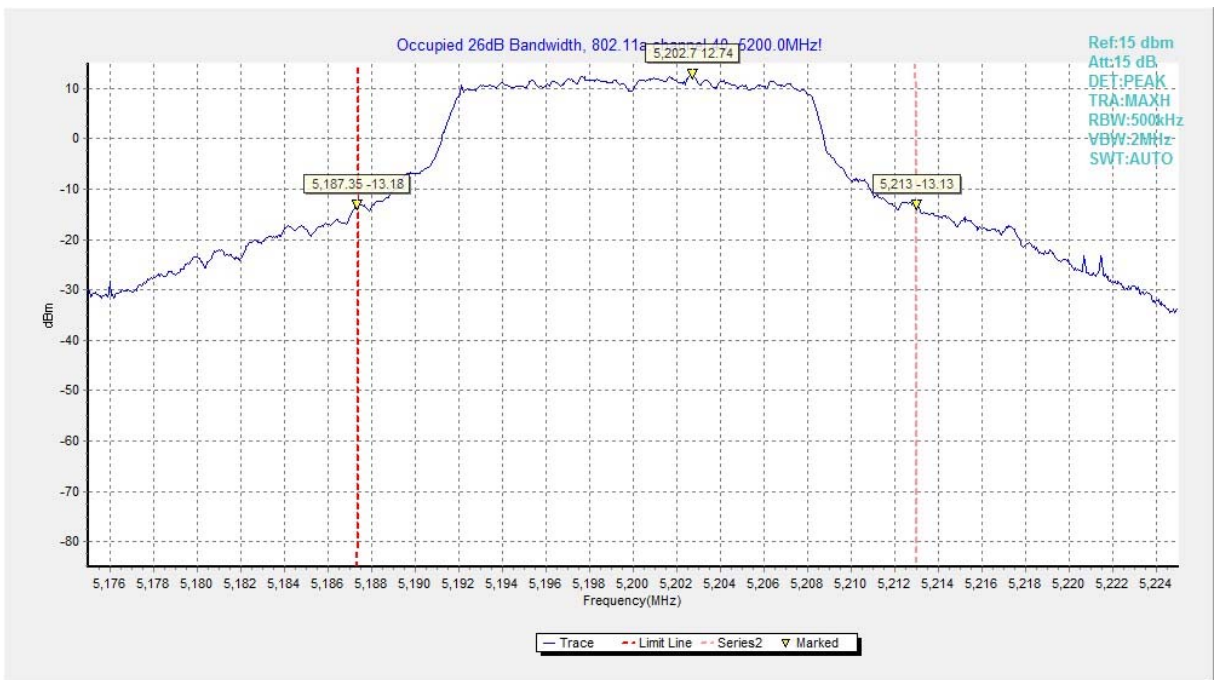


Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

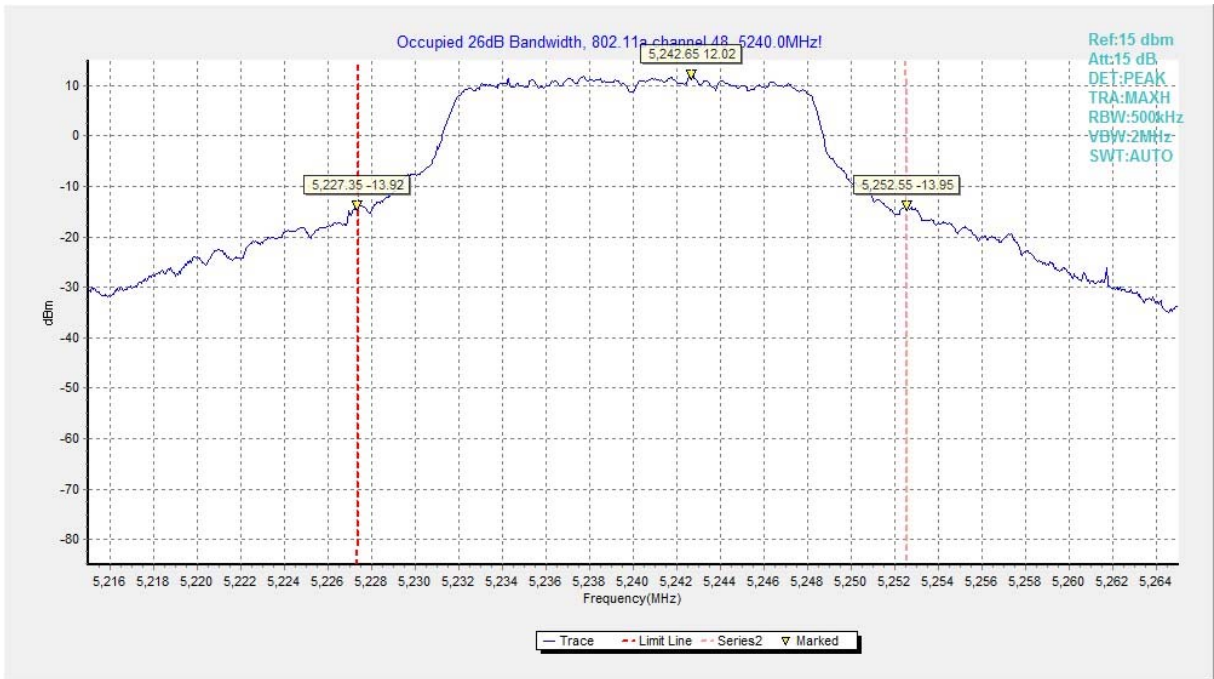


Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

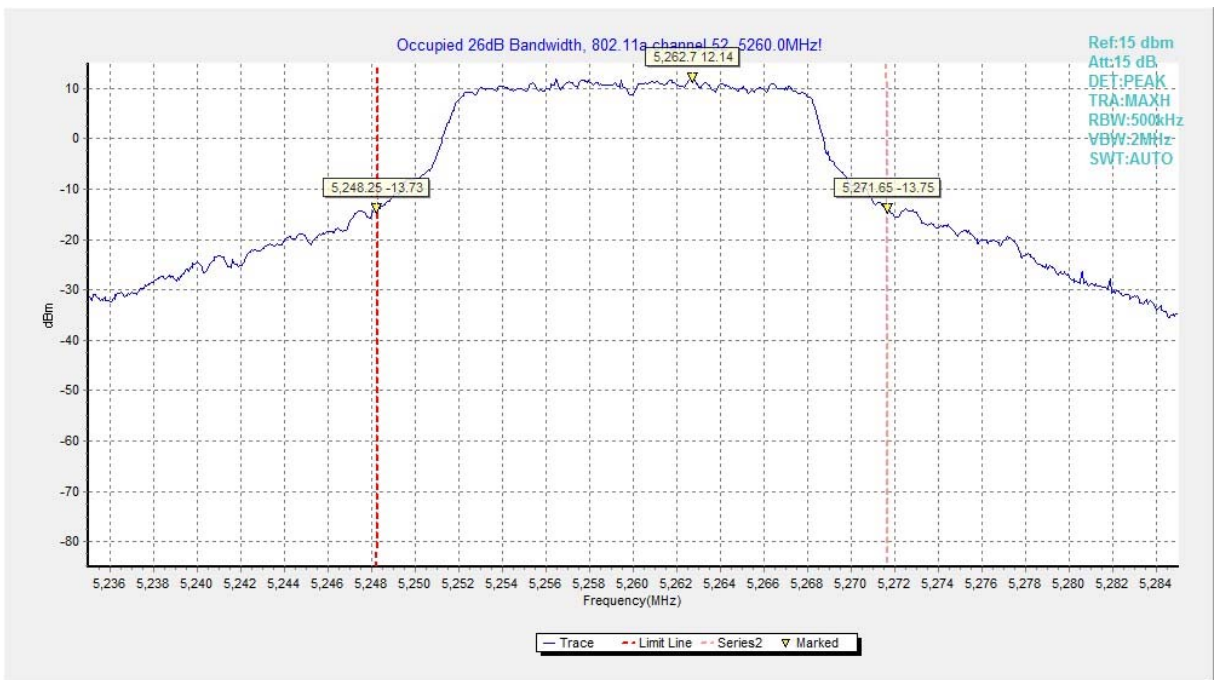


Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

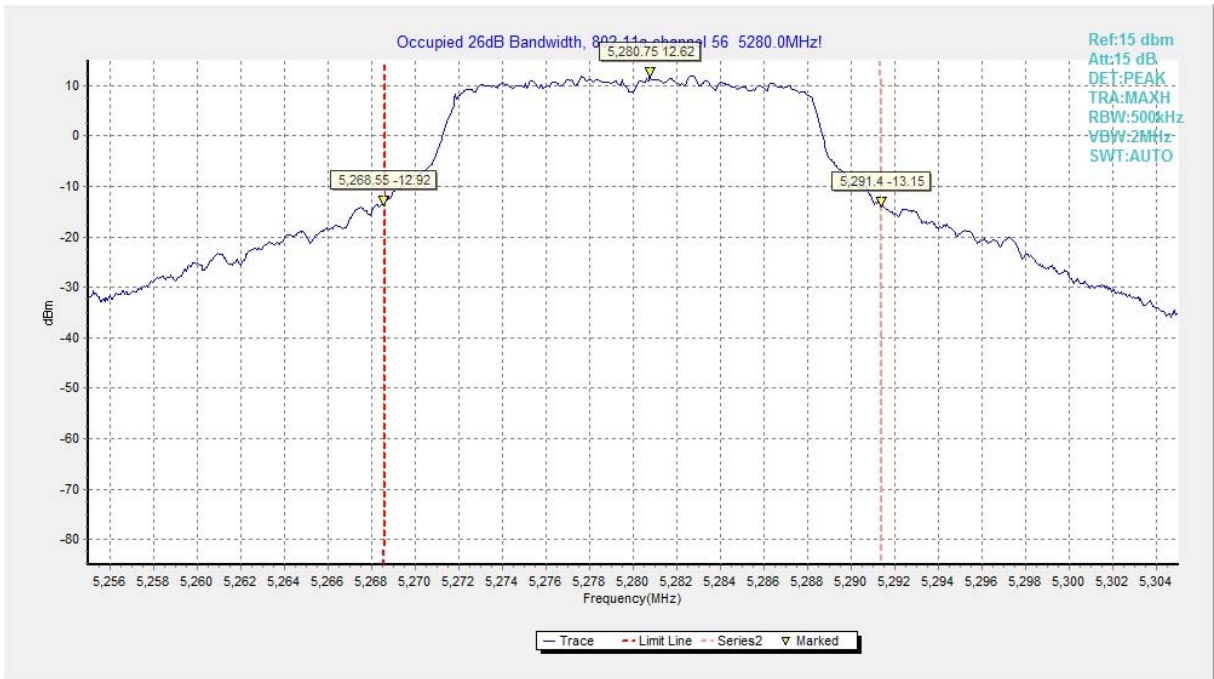


Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

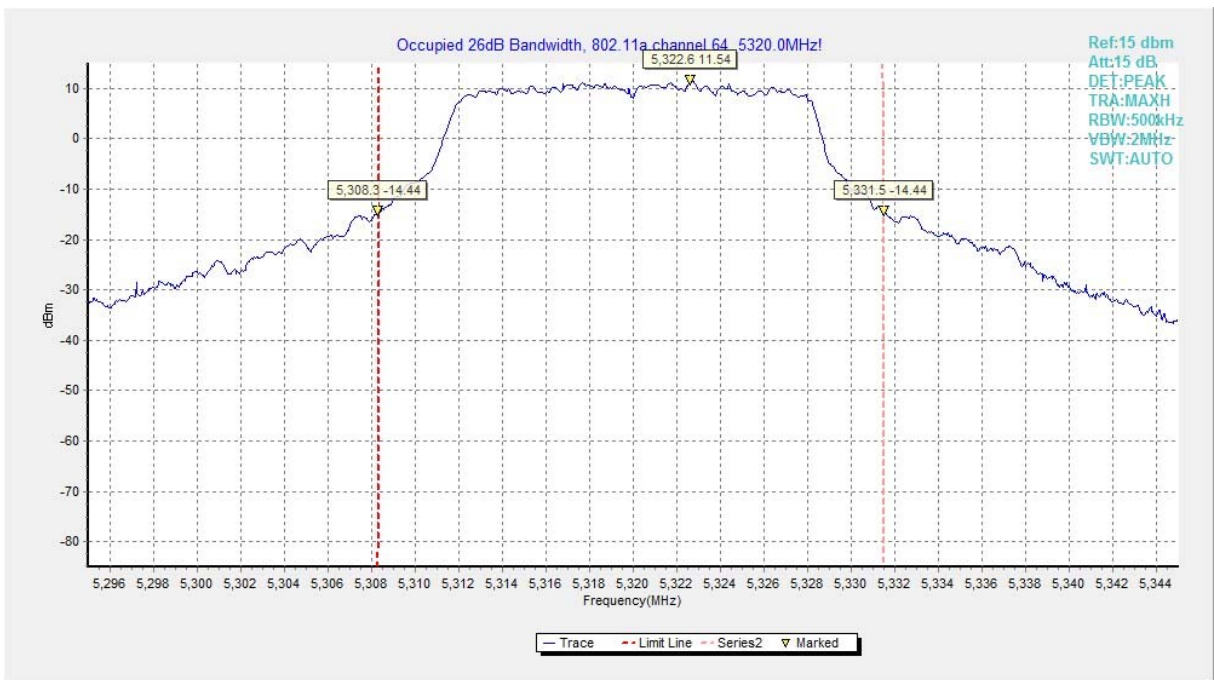


Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

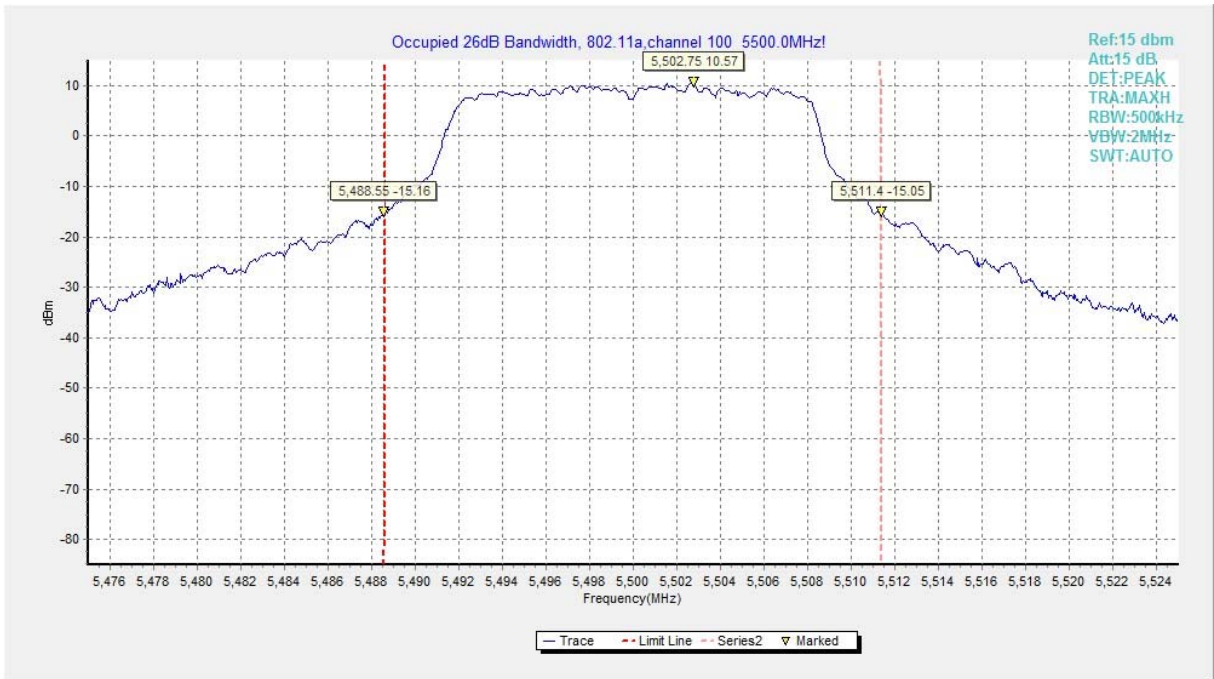


Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

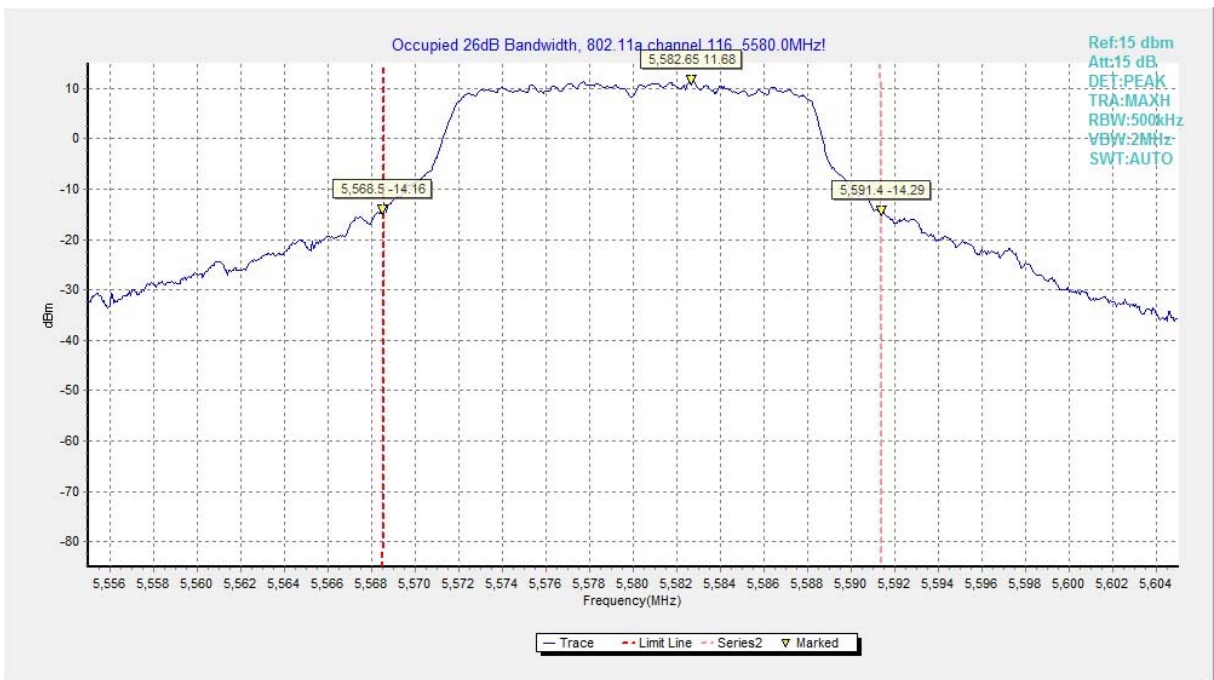


Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

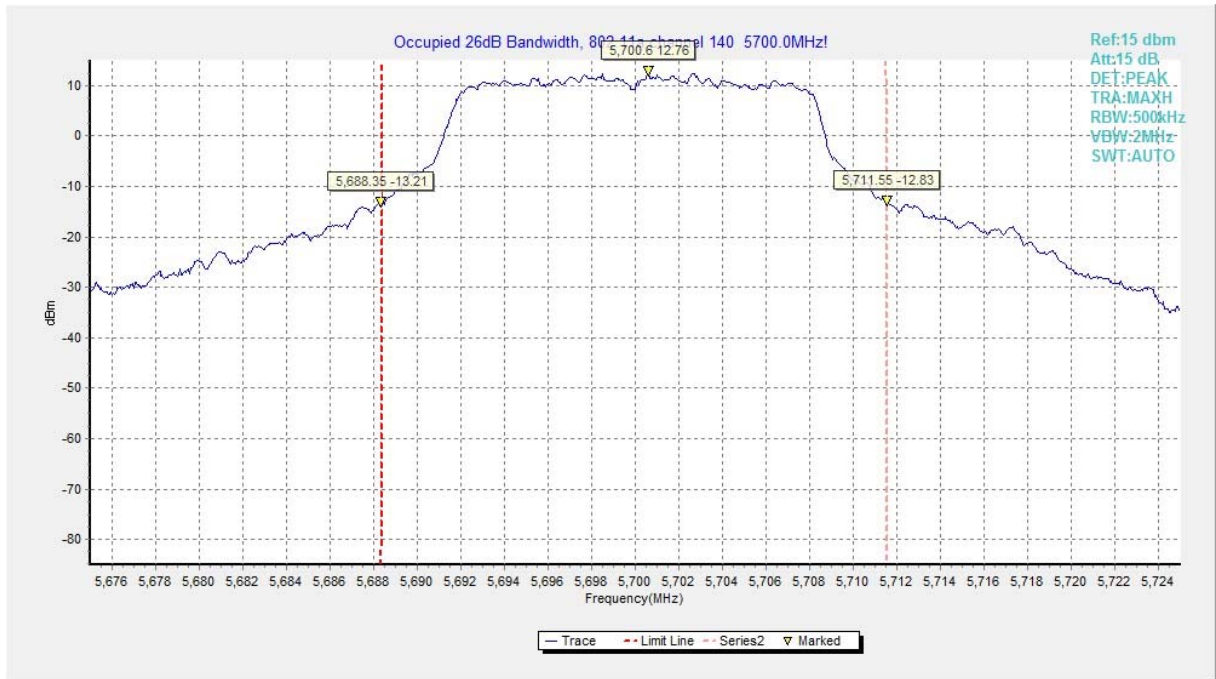


Fig.9 Occupied 26dB Bandwidth (802.11a, 5700MHz)



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

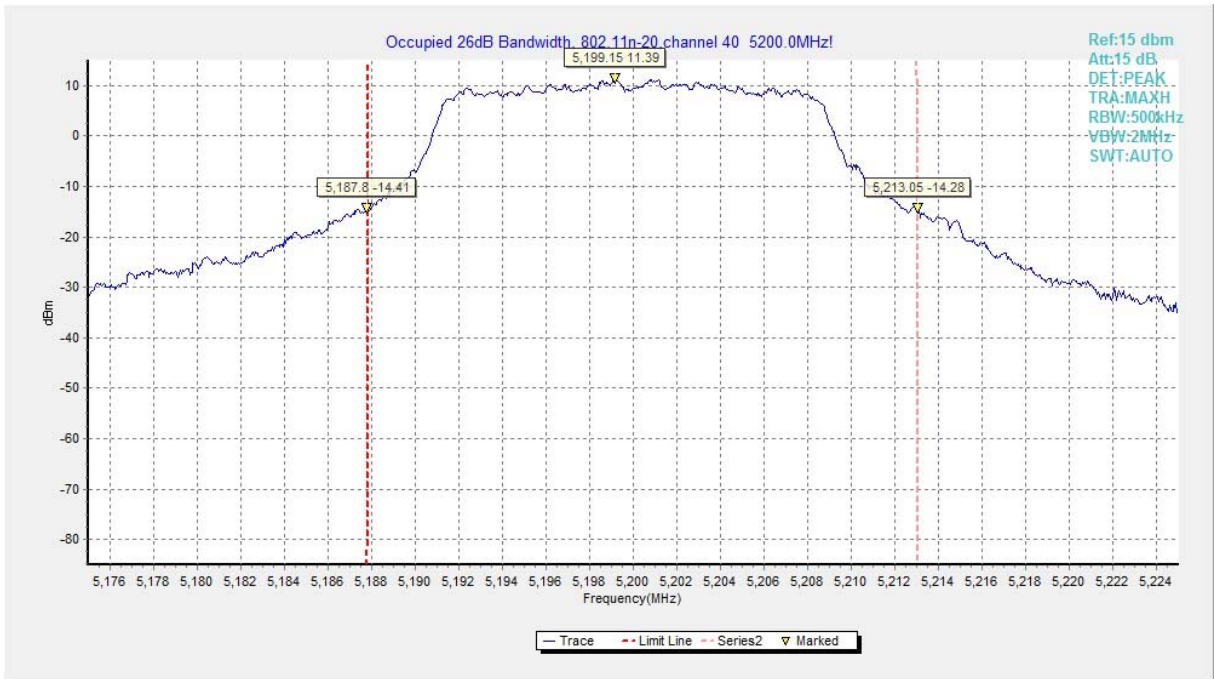


Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

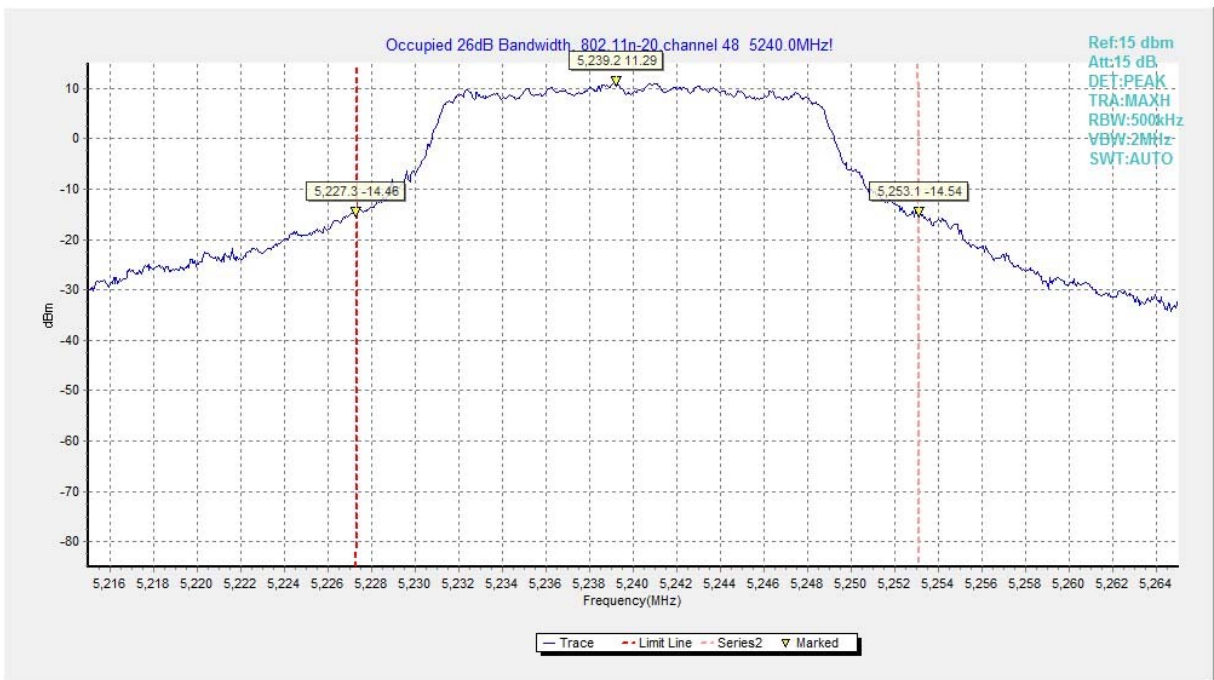


Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

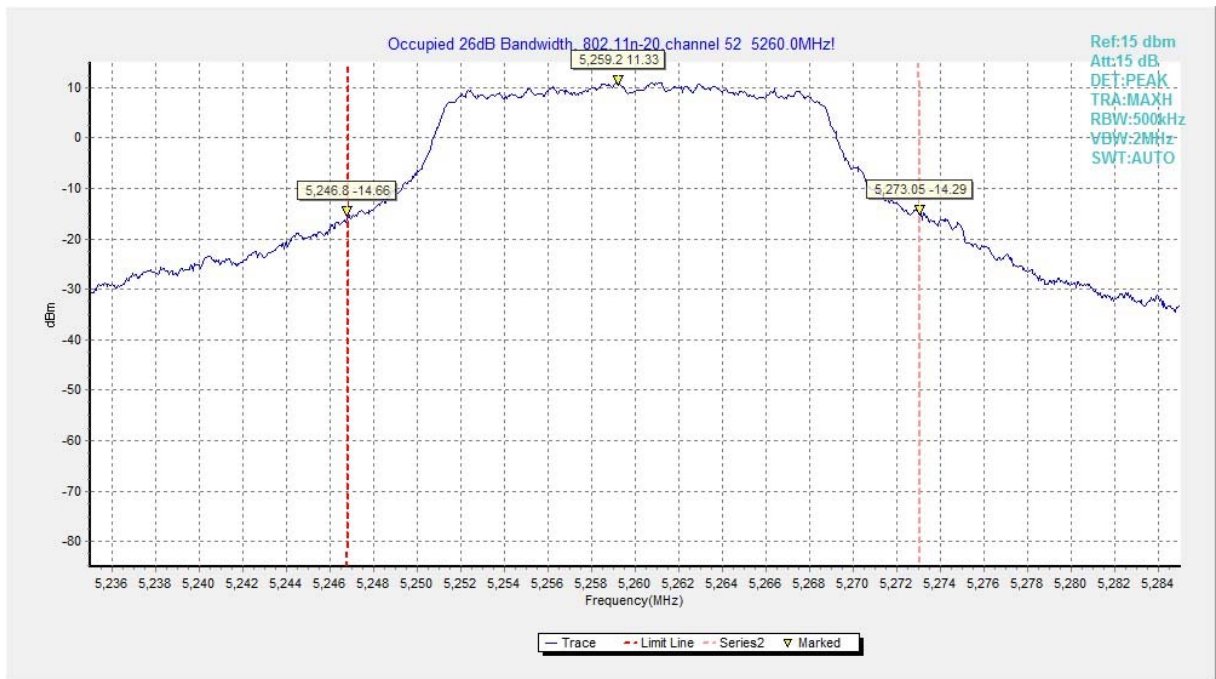


Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

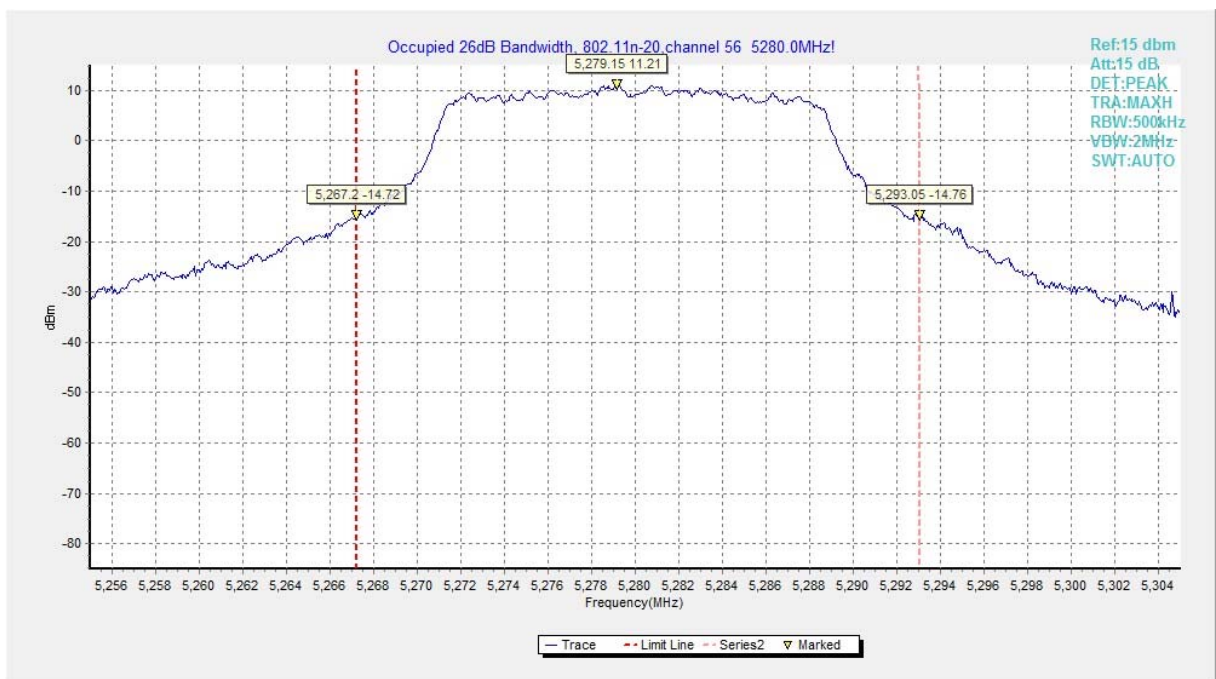


Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

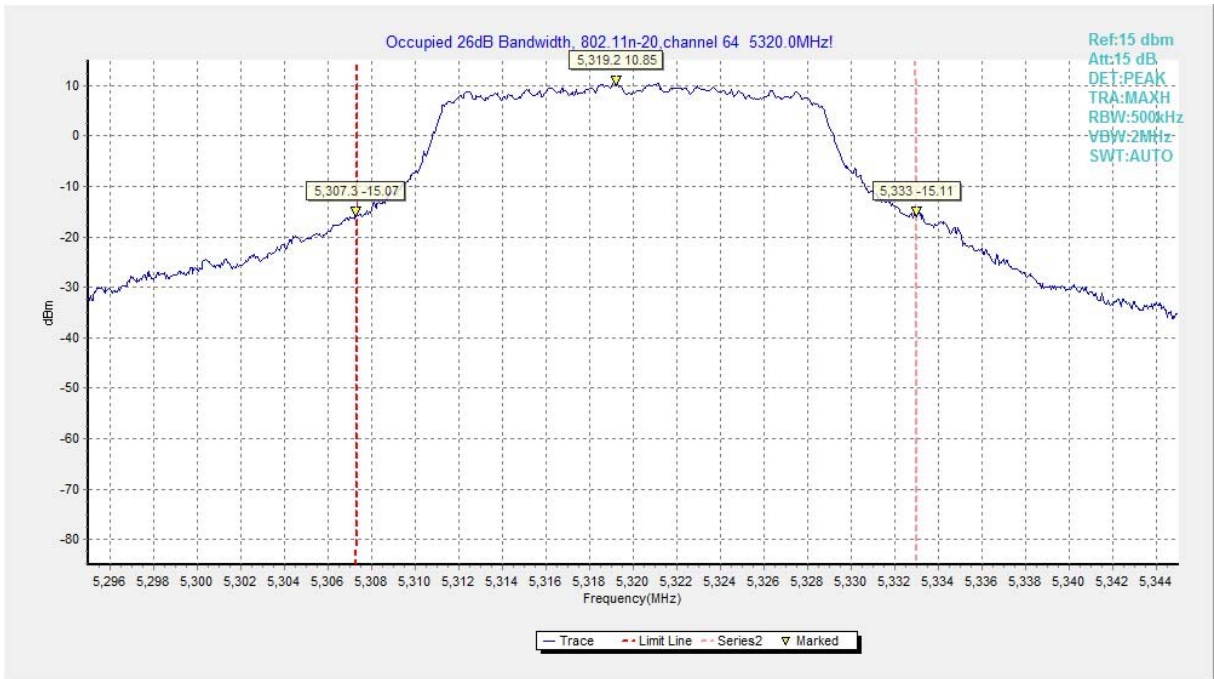


Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

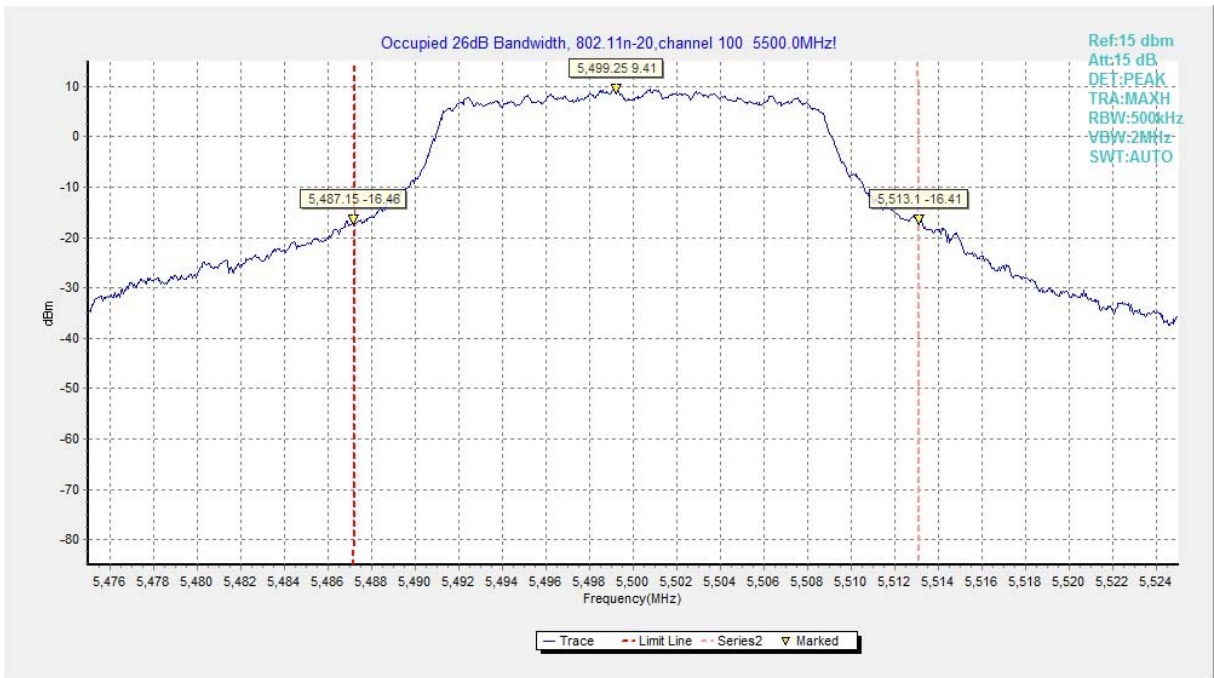


Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5500MHz)

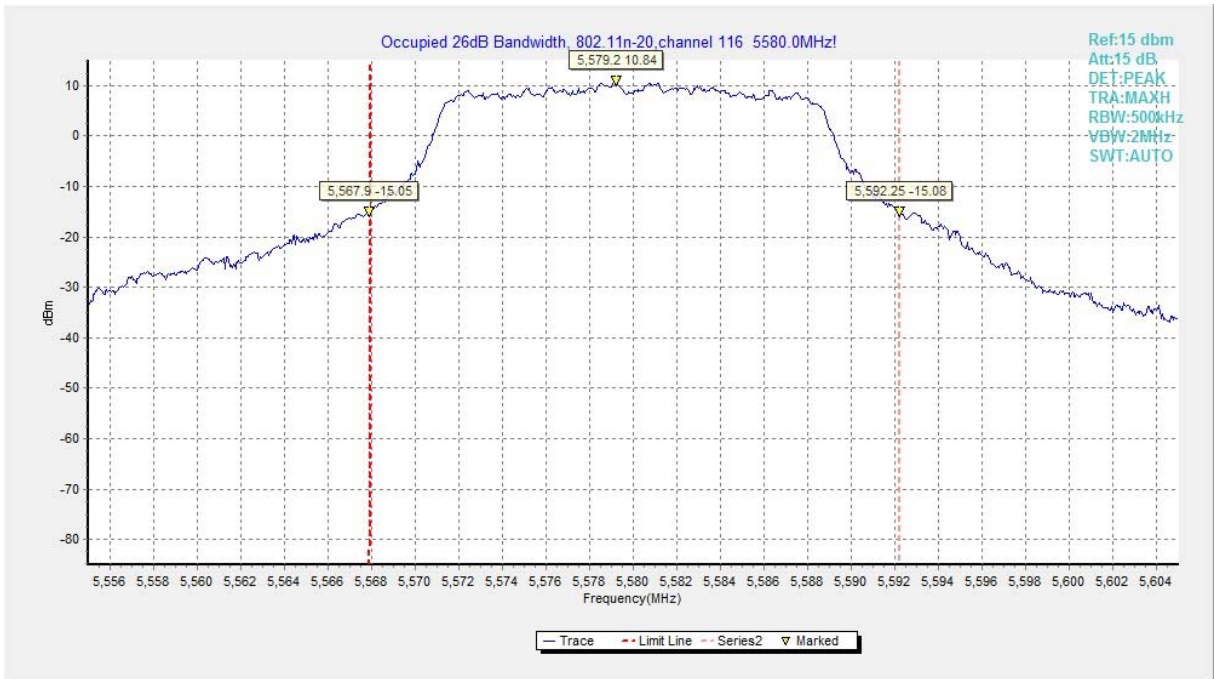


Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)



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

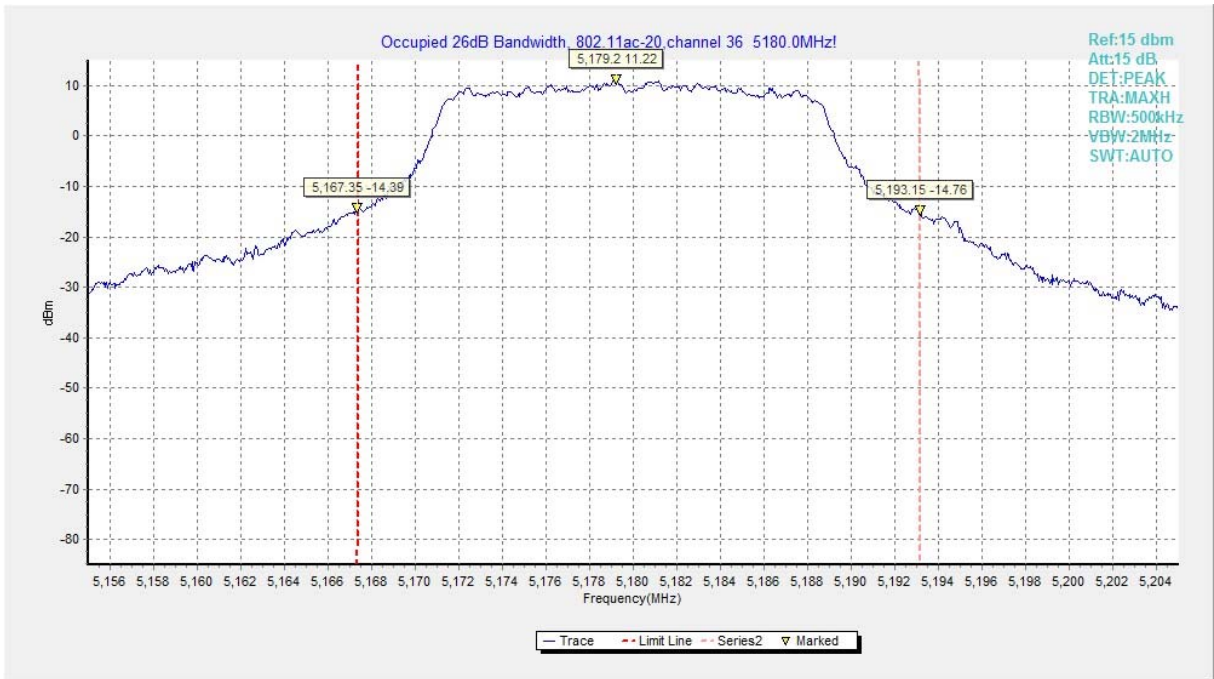


Fig.19 Occupied 26dB Bandwidth (802.11ac-HT20, 5180MHz)

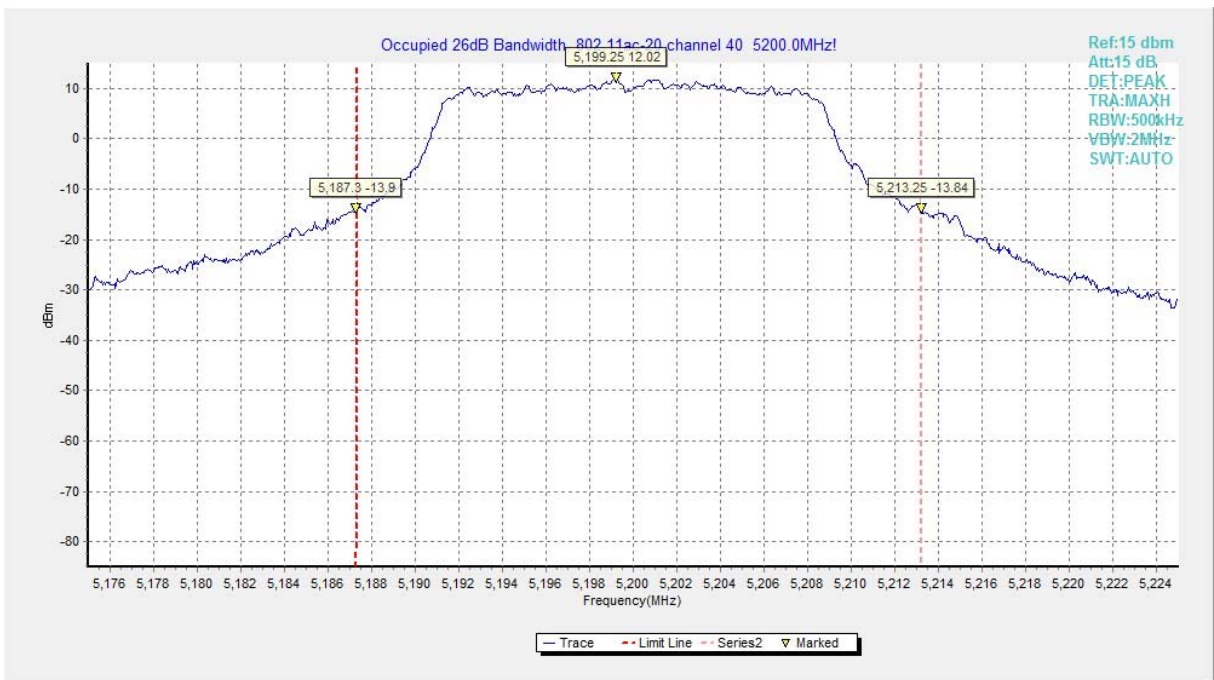


Fig.20 Occupied 26dB Bandwidth (802.11ac-HT20, 5200MHz)

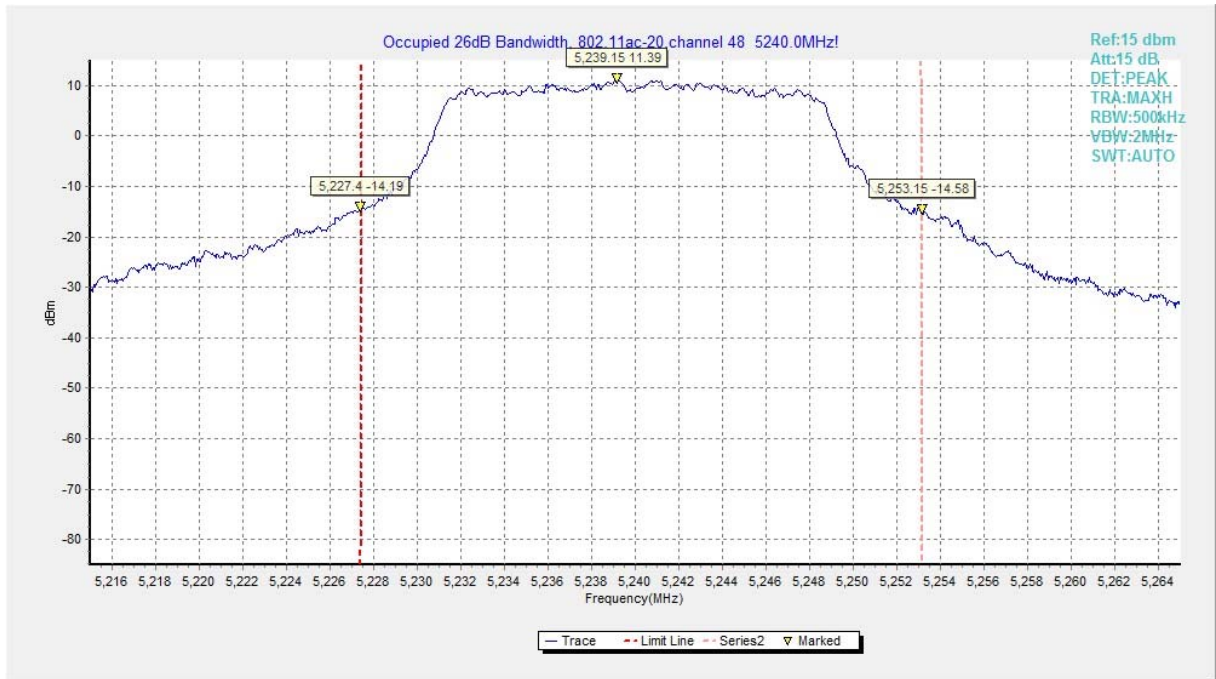


Fig.21 Occupied 26dB Bandwidth (802.11ac-HT20, 5240MHz)

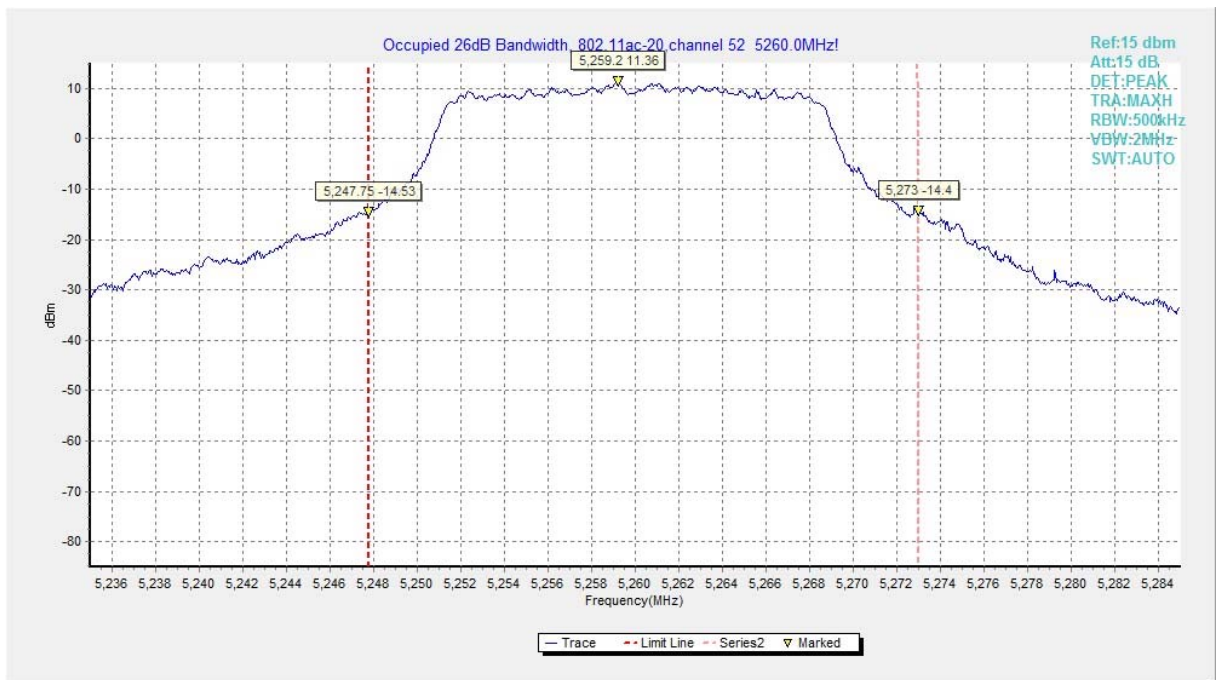


Fig.22 Occupied 26dB Bandwidth (802.11ac-HT20, 5260MHz)

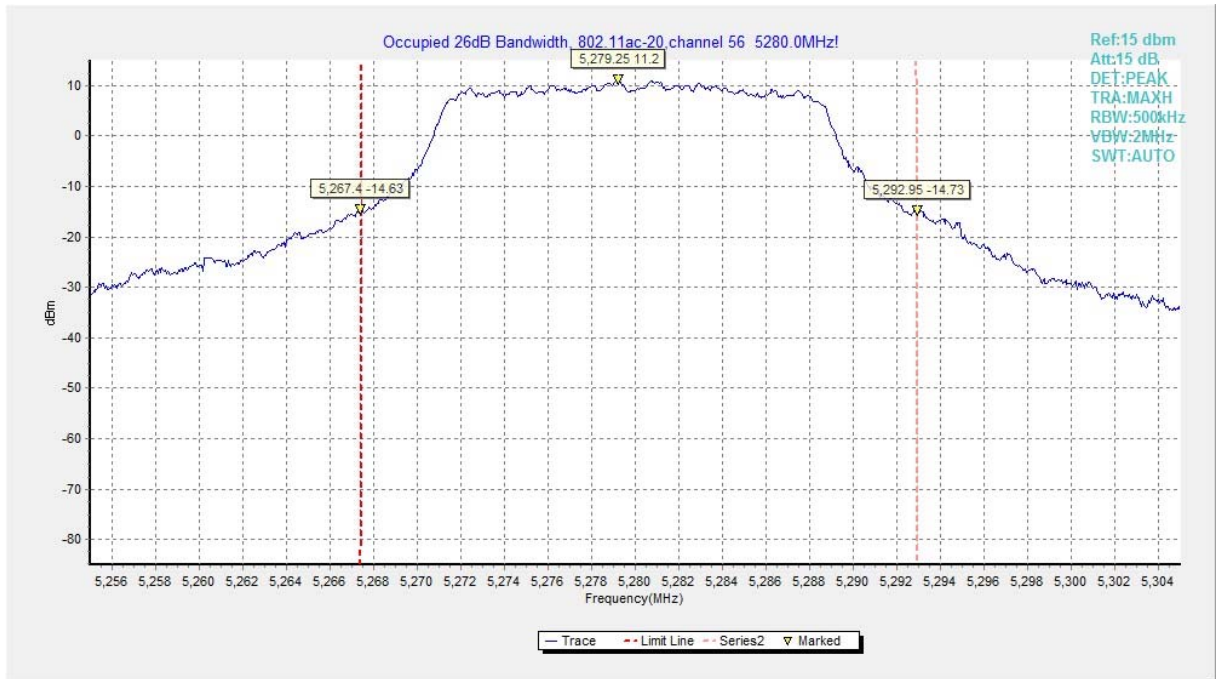


Fig.23 Occupied 26dB Bandwidth (802.11ac-HT20, 5280MHz)

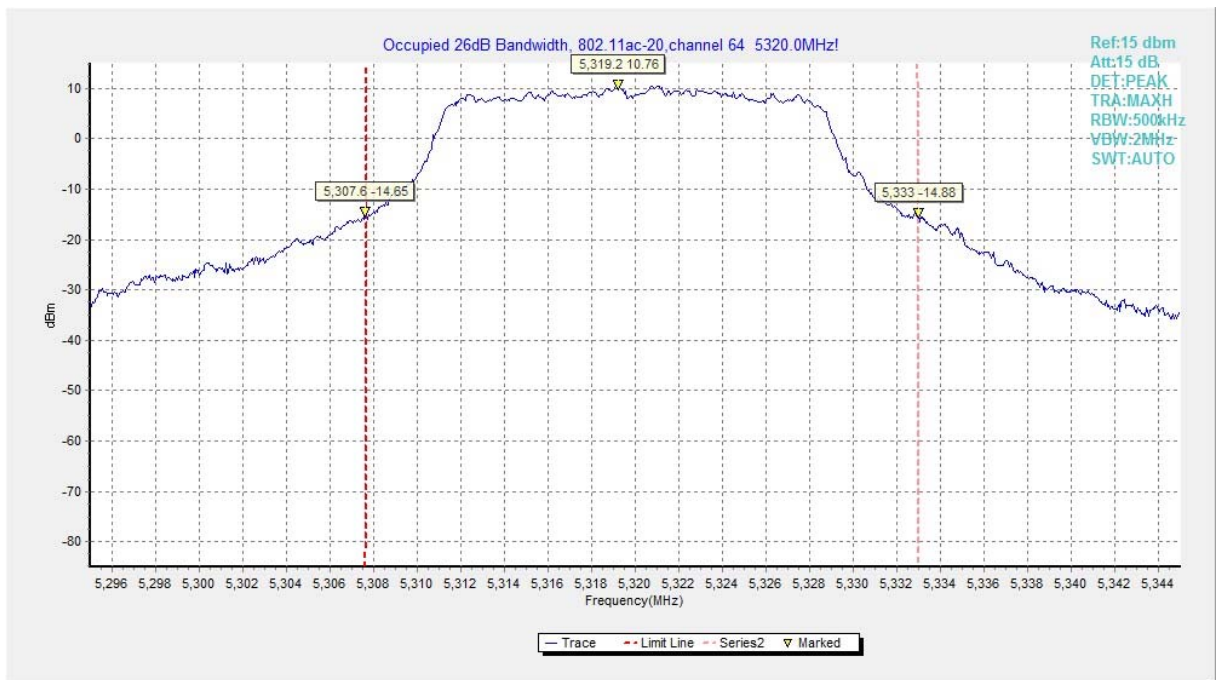


Fig.24 Occupied 26dB Bandwidth (802.11ac-HT20, 5320MHz)

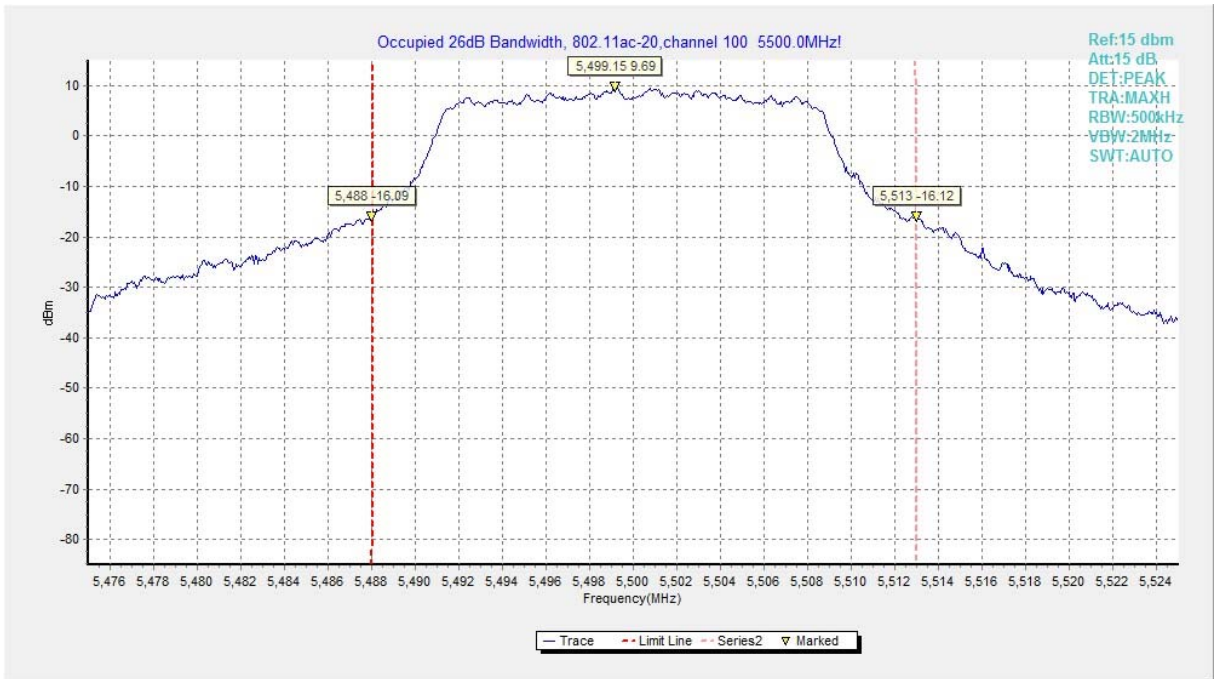


Fig.25 Occupied 26dB Bandwidth (802. 11ac-HT20, 5500MHz)

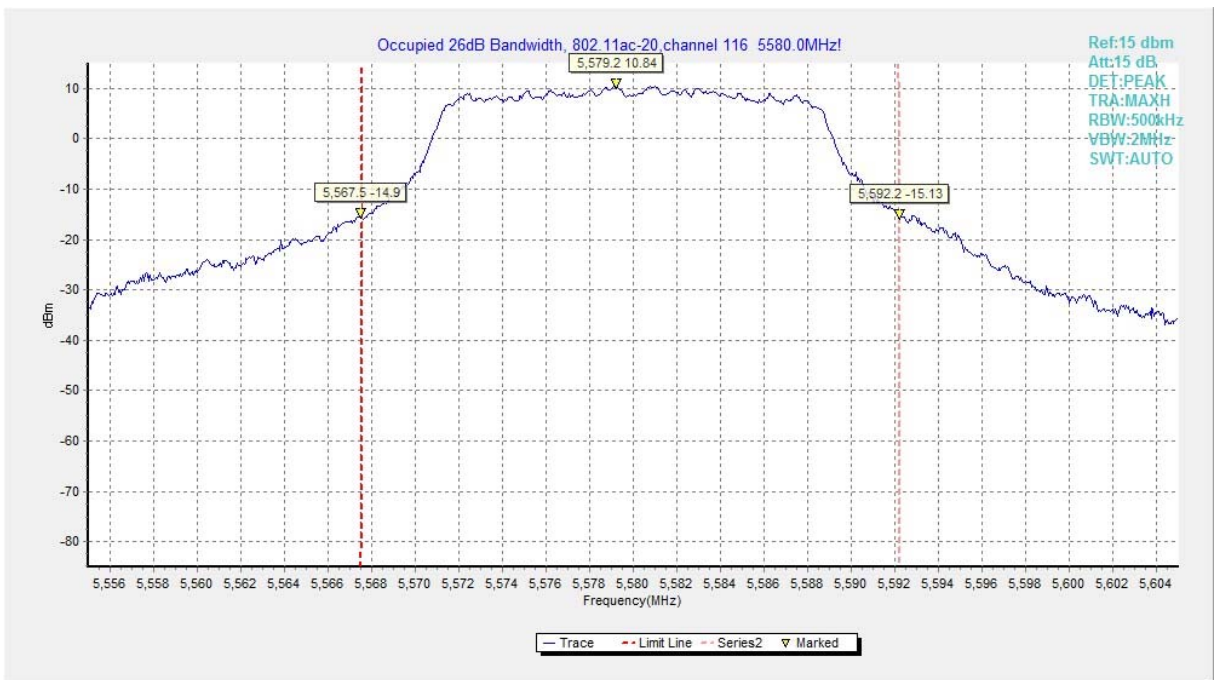


Fig.26 Occupied 26dB Bandwidth (802. 11ac-HT20, 5580MHz)

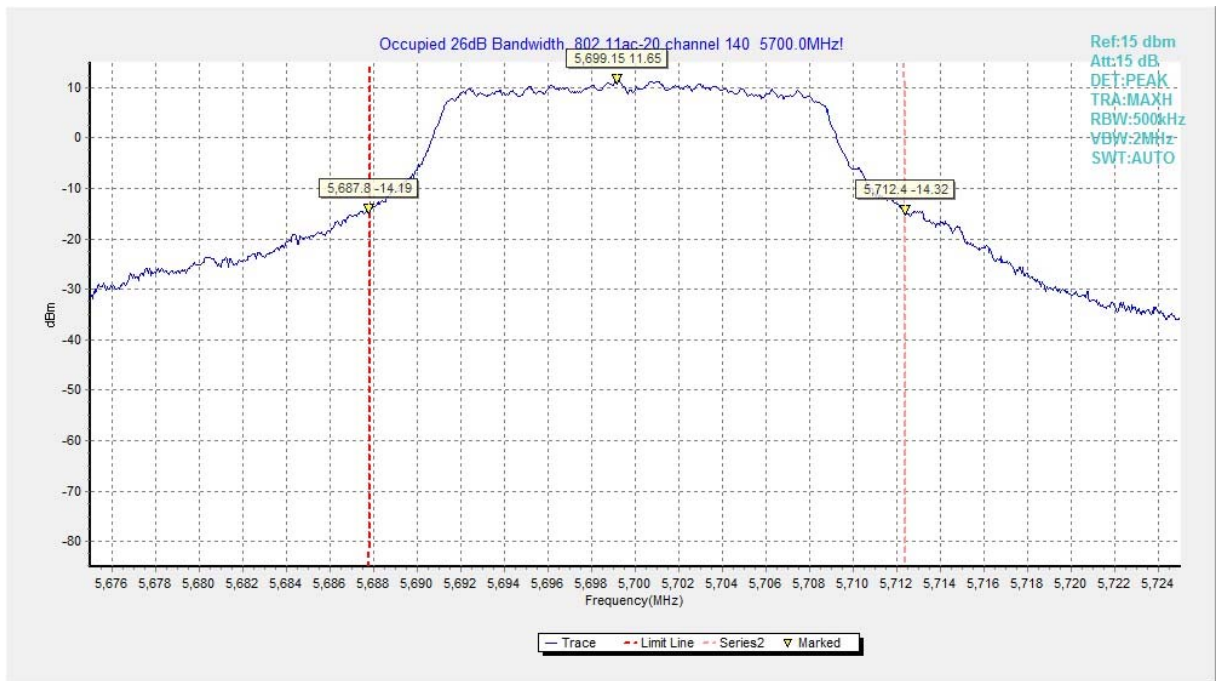


Fig.27 Occupied 26dB Bandwidth (802.11ac-HT20, 5700MHz)

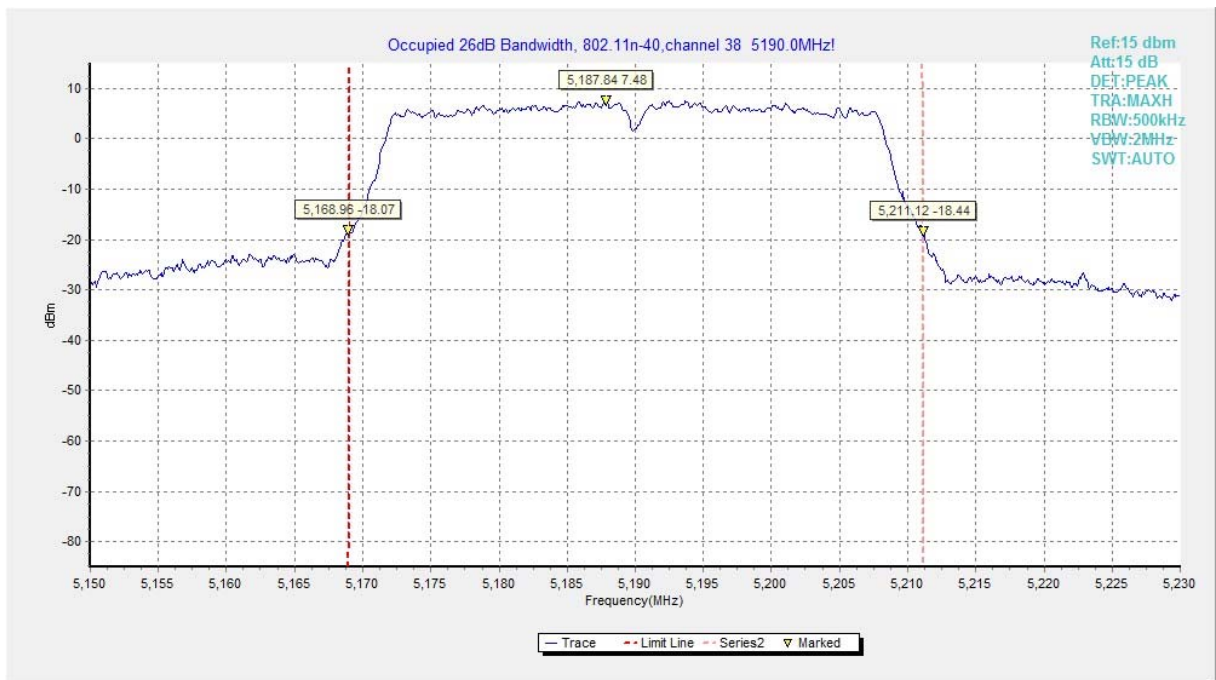


Fig.28 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

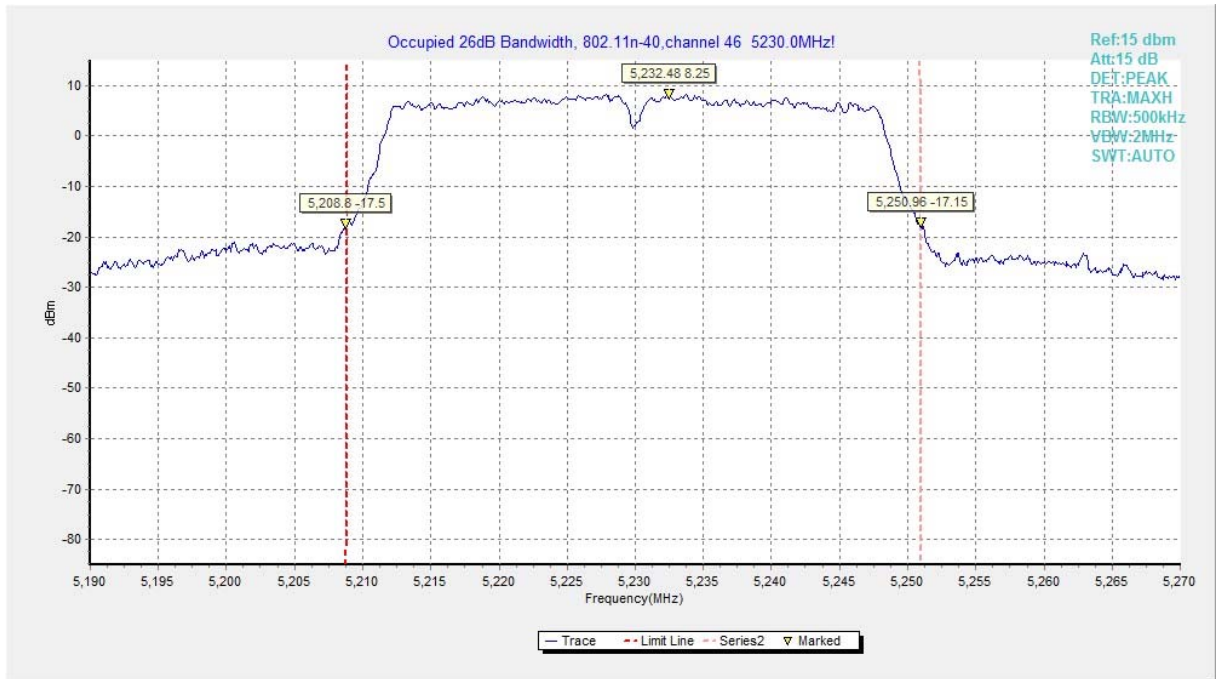


Fig.29 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

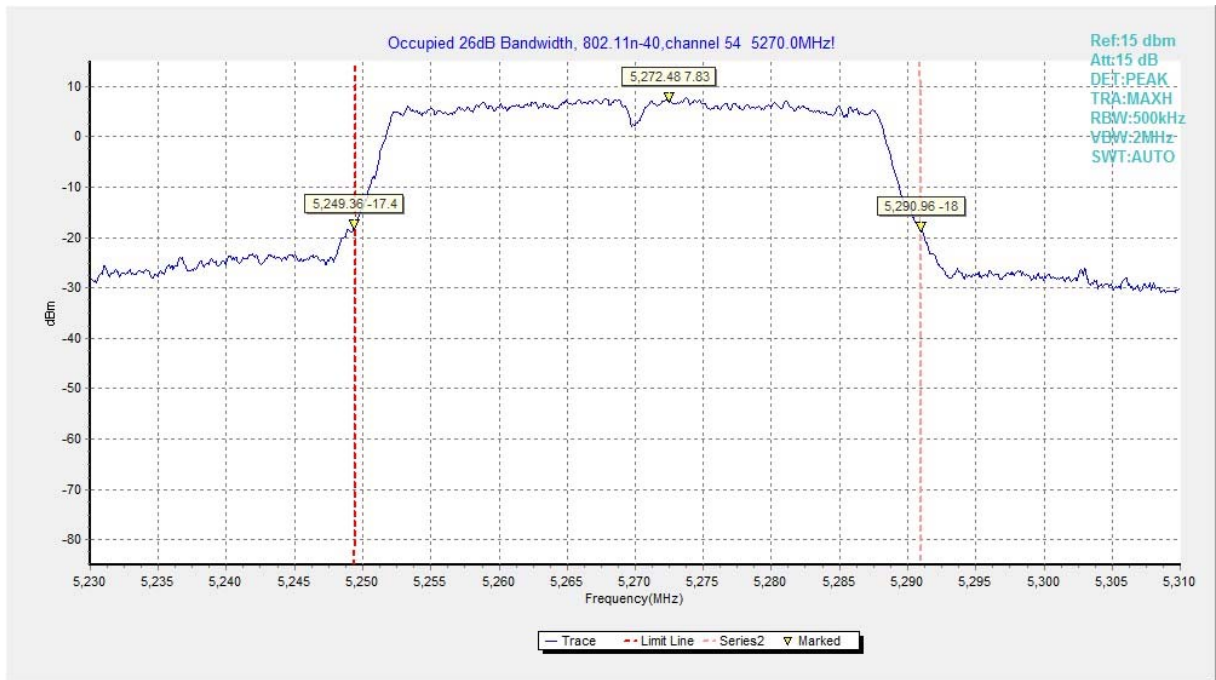


Fig.30 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

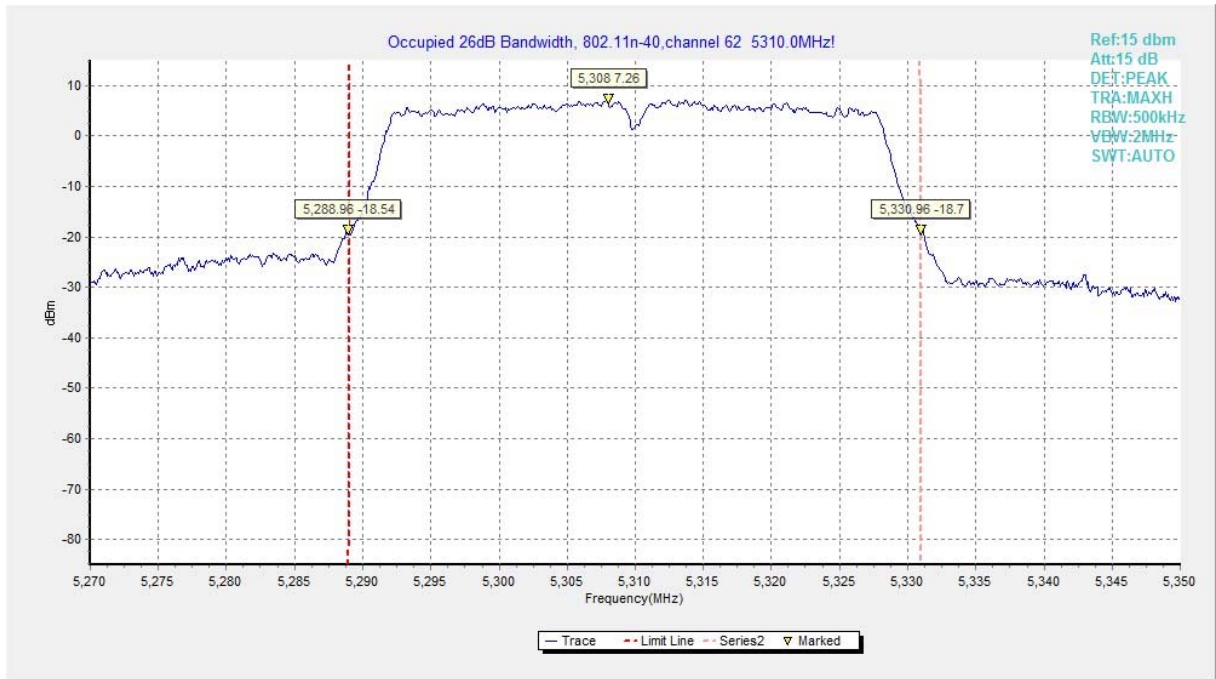


Fig.31 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

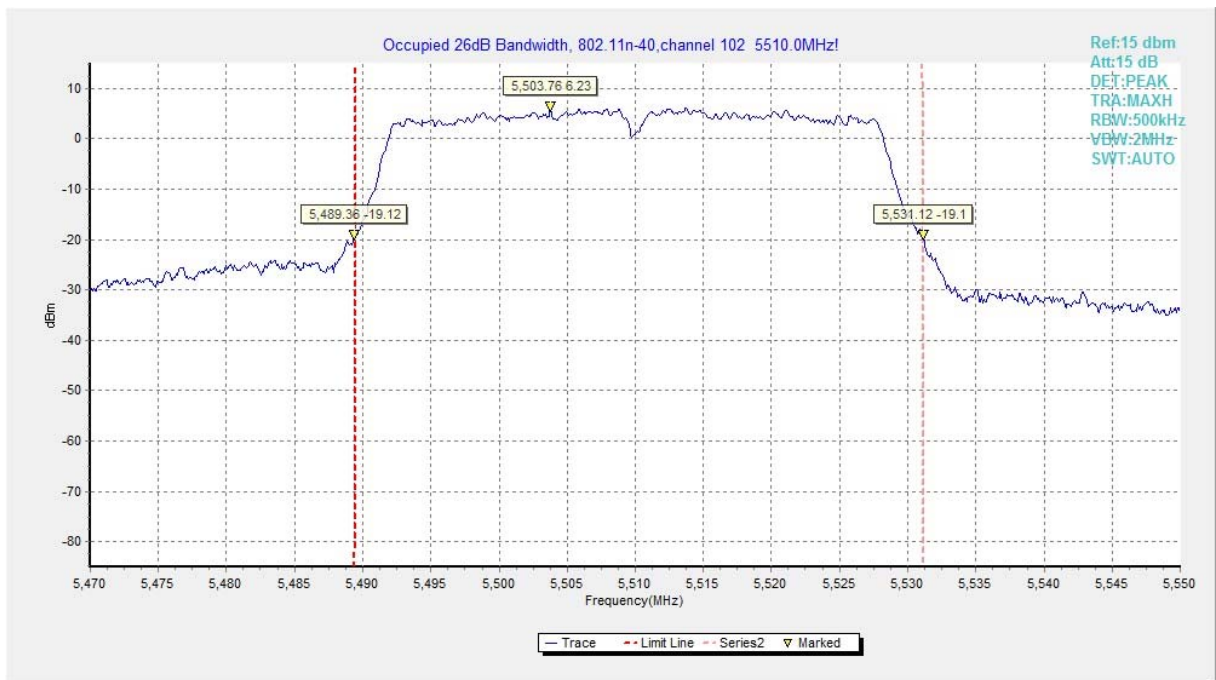


Fig.32 Occupied 26dB Bandwidth (802.11n-HT40, 5510MHz)

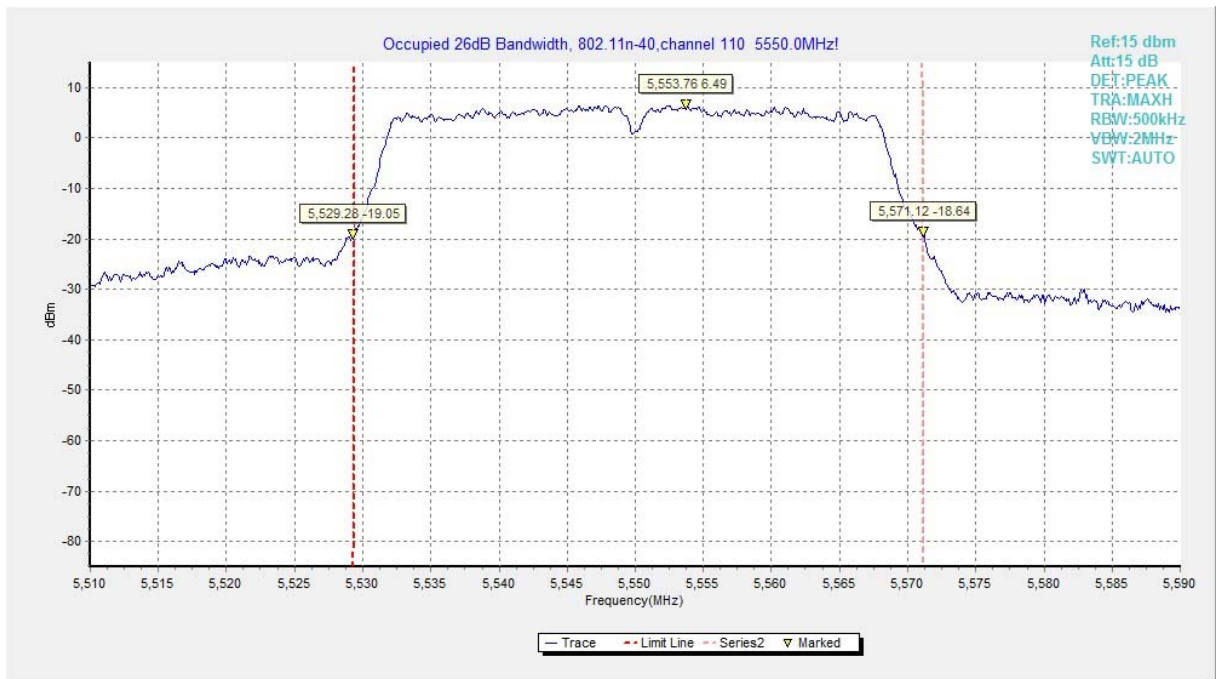


Fig.33 Occupied 26dB Bandwidth (802. 11n-HT40, 5590MHz)

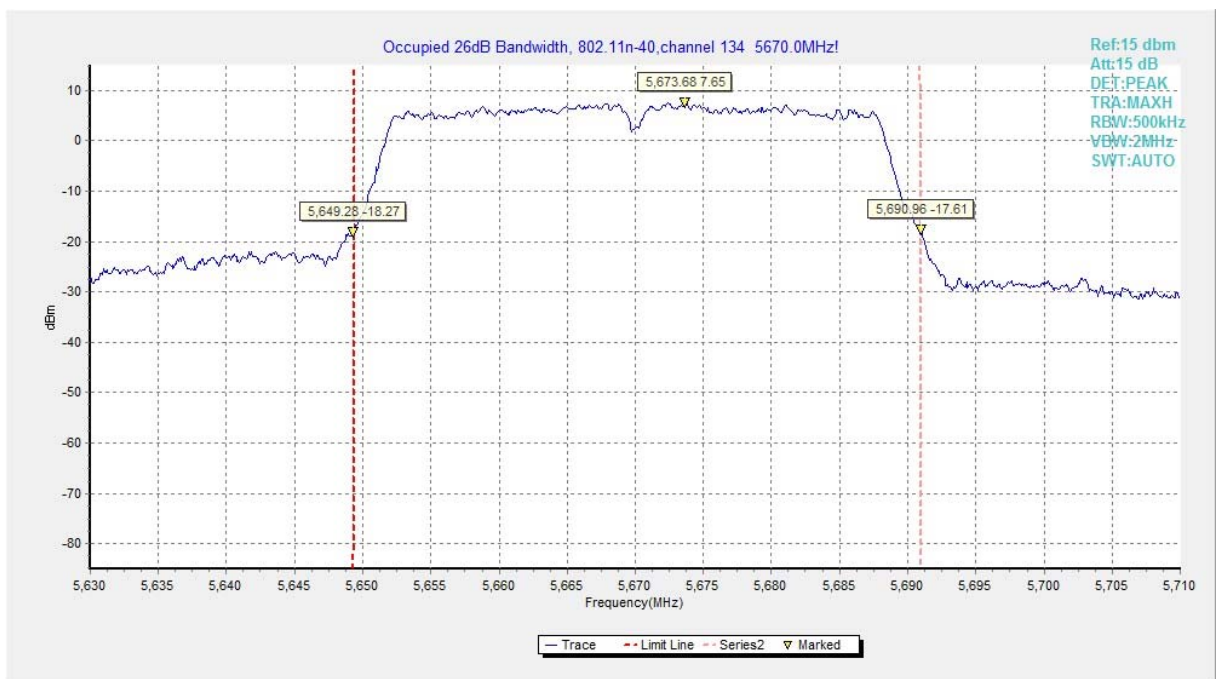


Fig.34 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

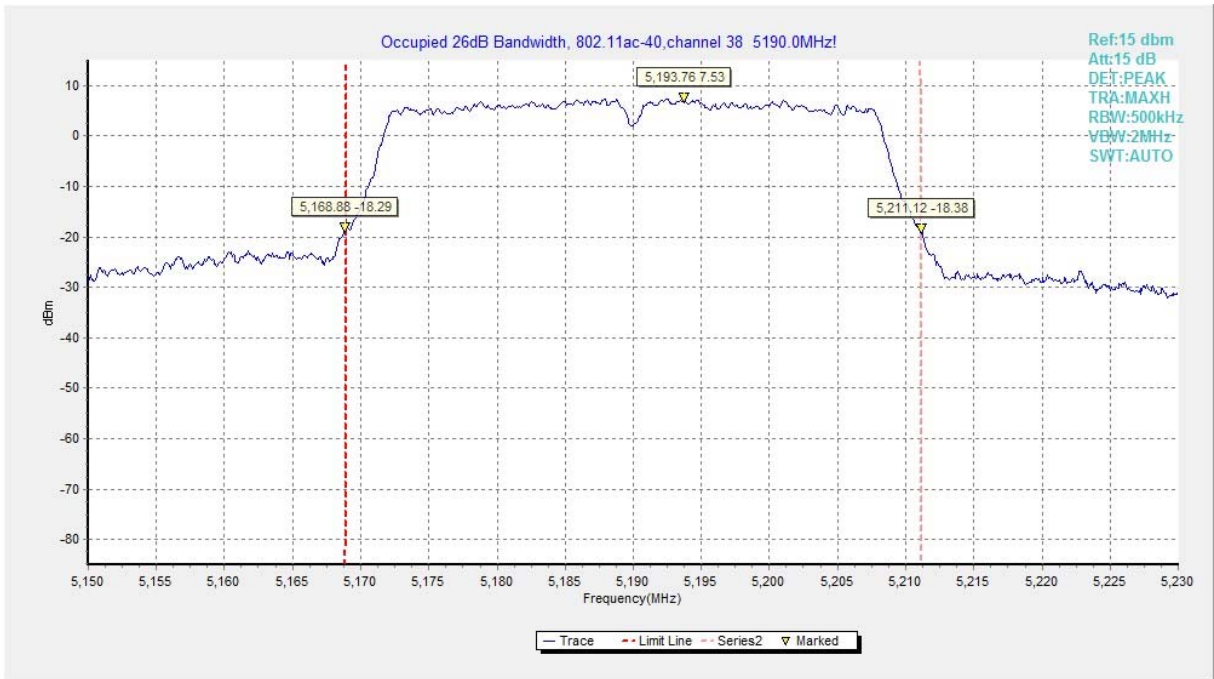


Fig.35 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

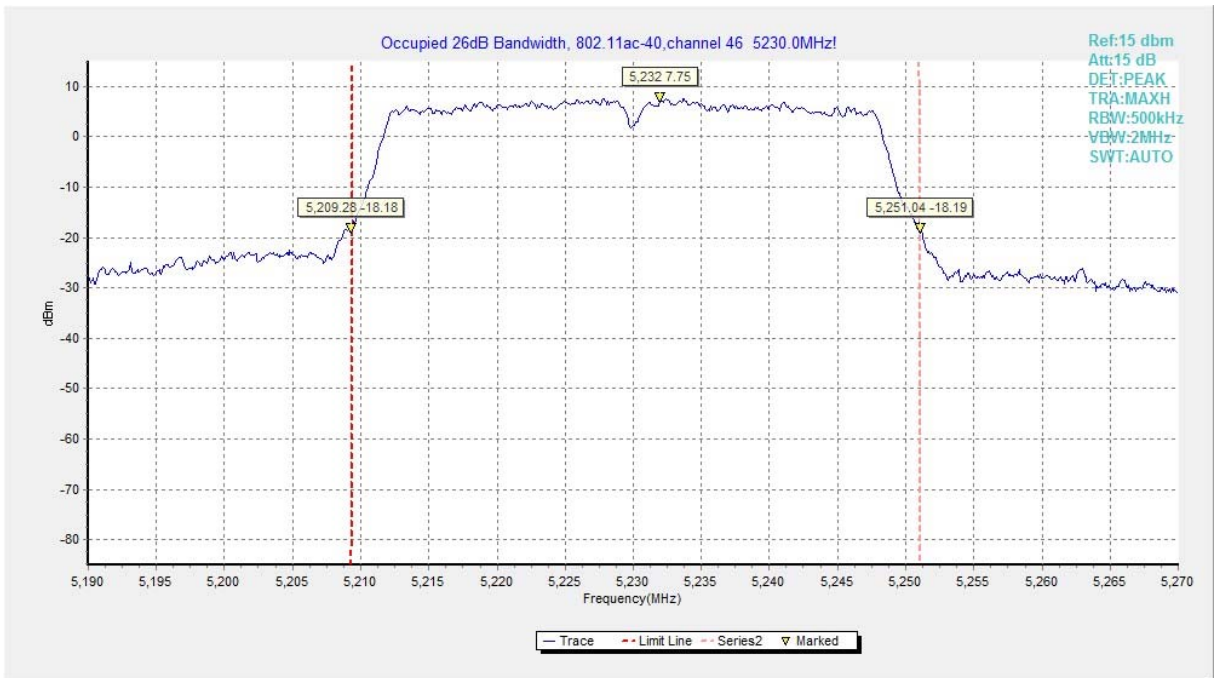


Fig.36 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

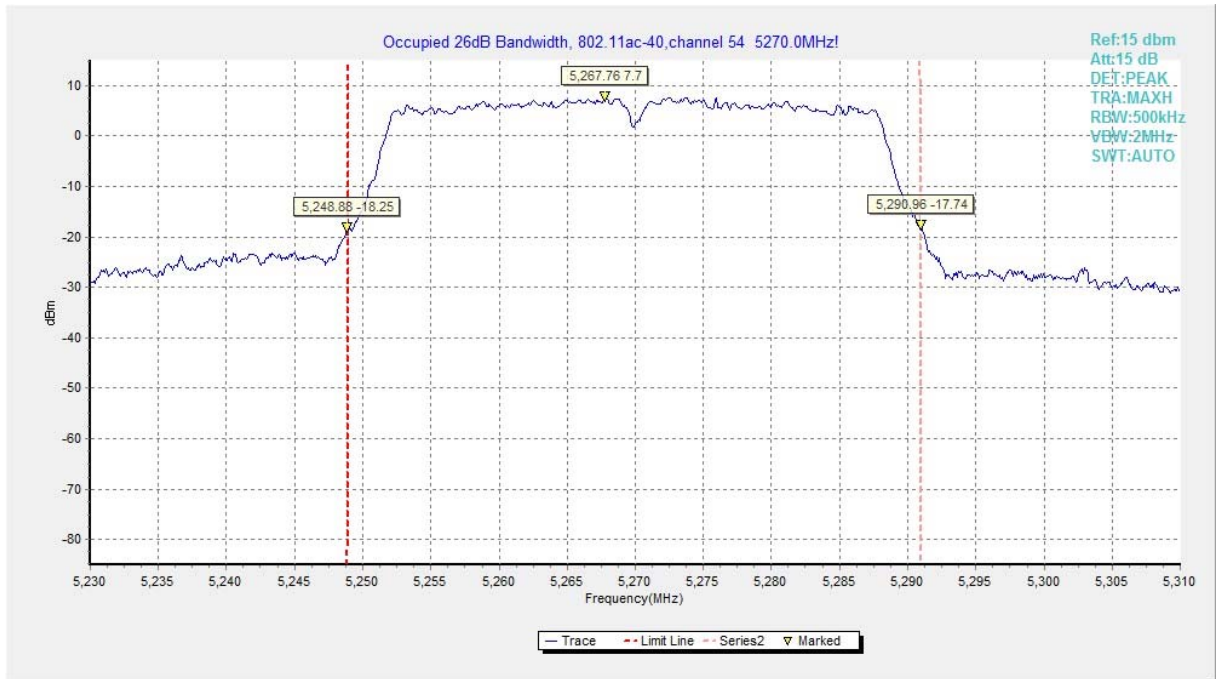


Fig.37 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

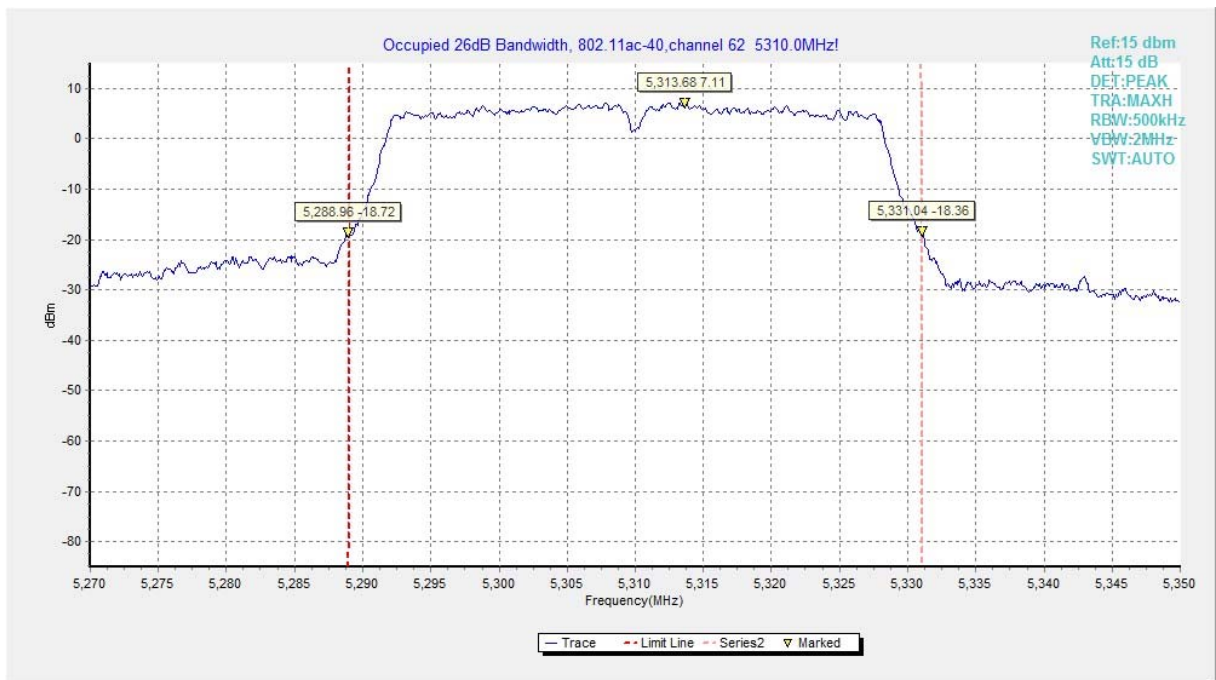


Fig.38 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

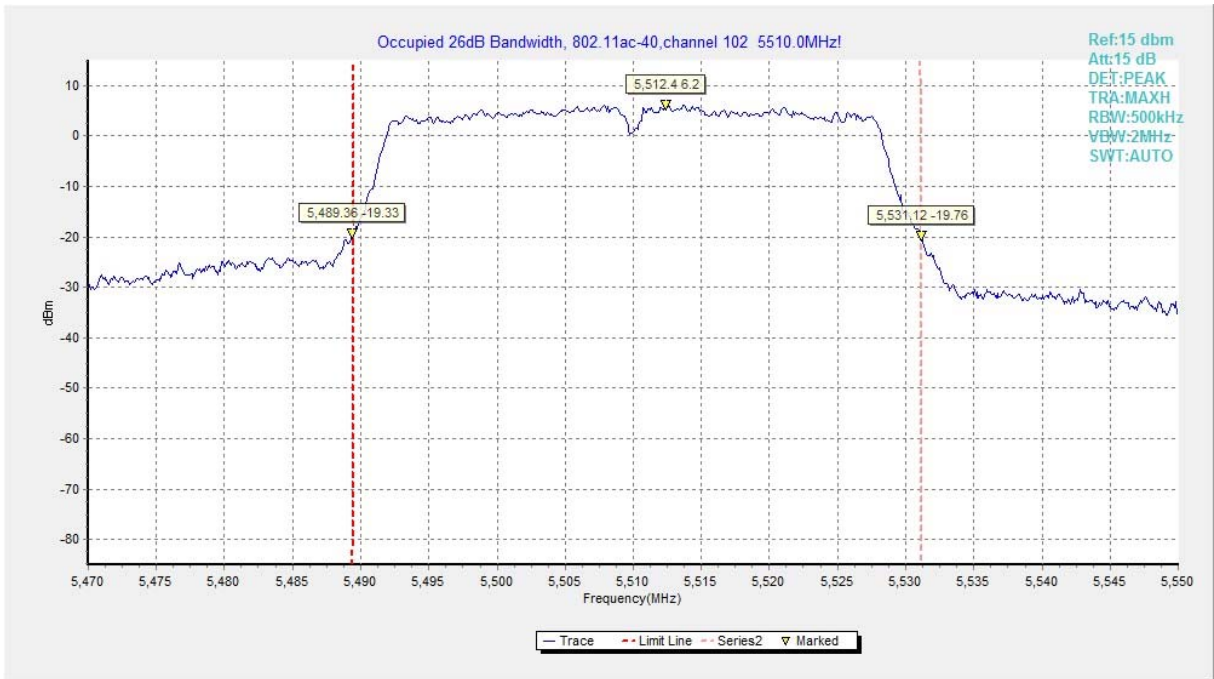


Fig.39 Occupied 26dB Bandwidth (802. 11ac-HT40, 5510MHz)

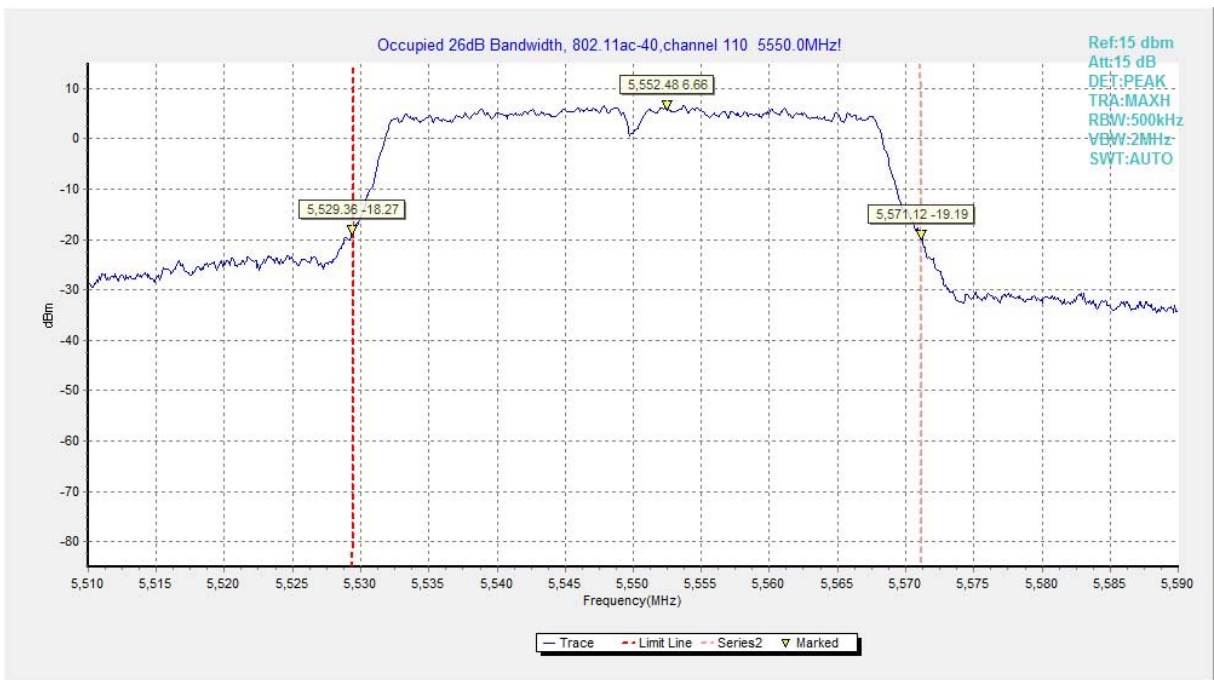


Fig.40 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

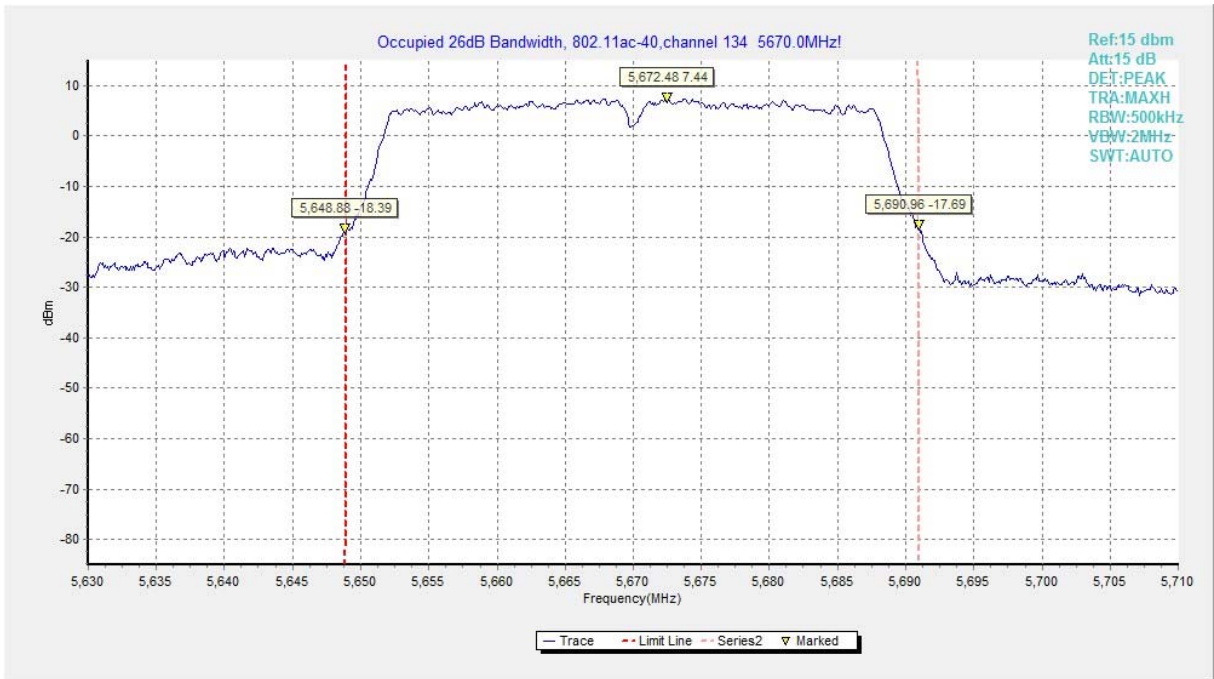


Fig.41 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

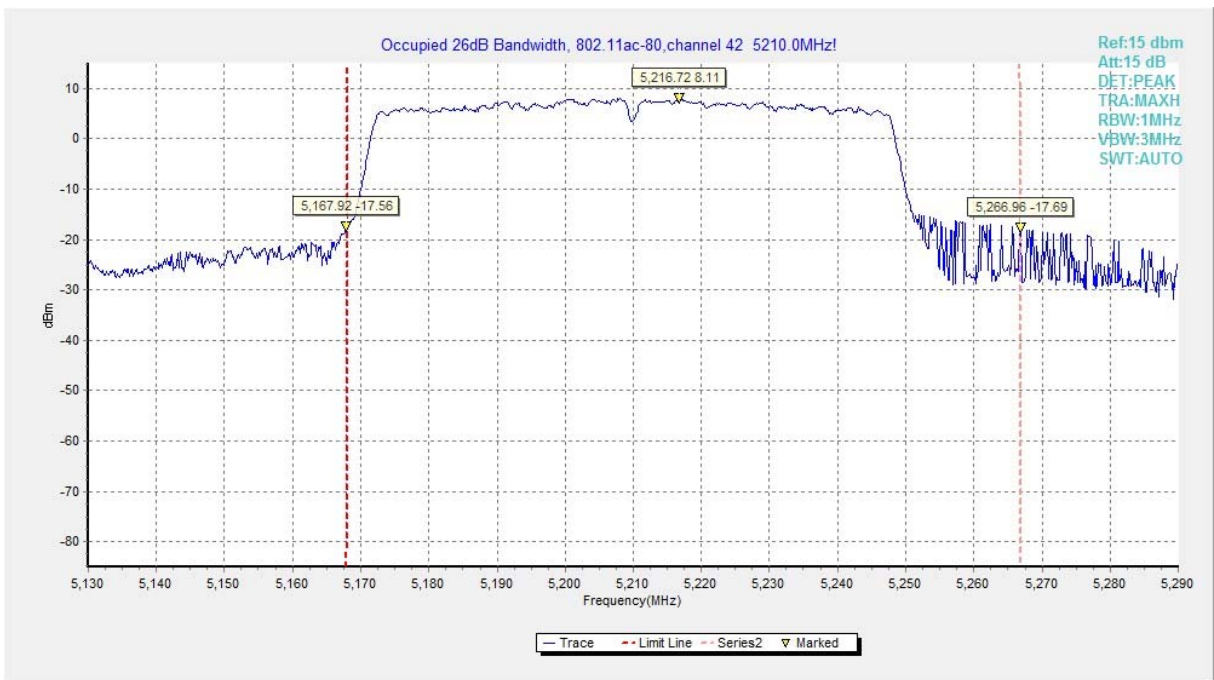


Fig.42 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

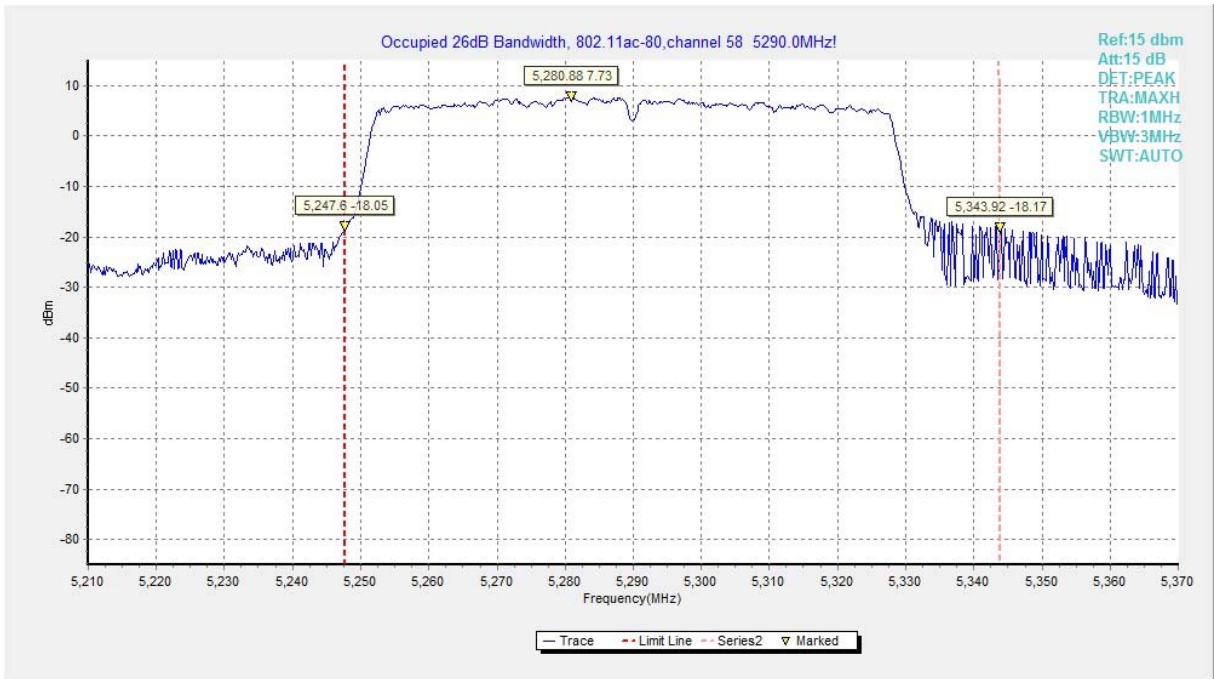


Fig.43 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

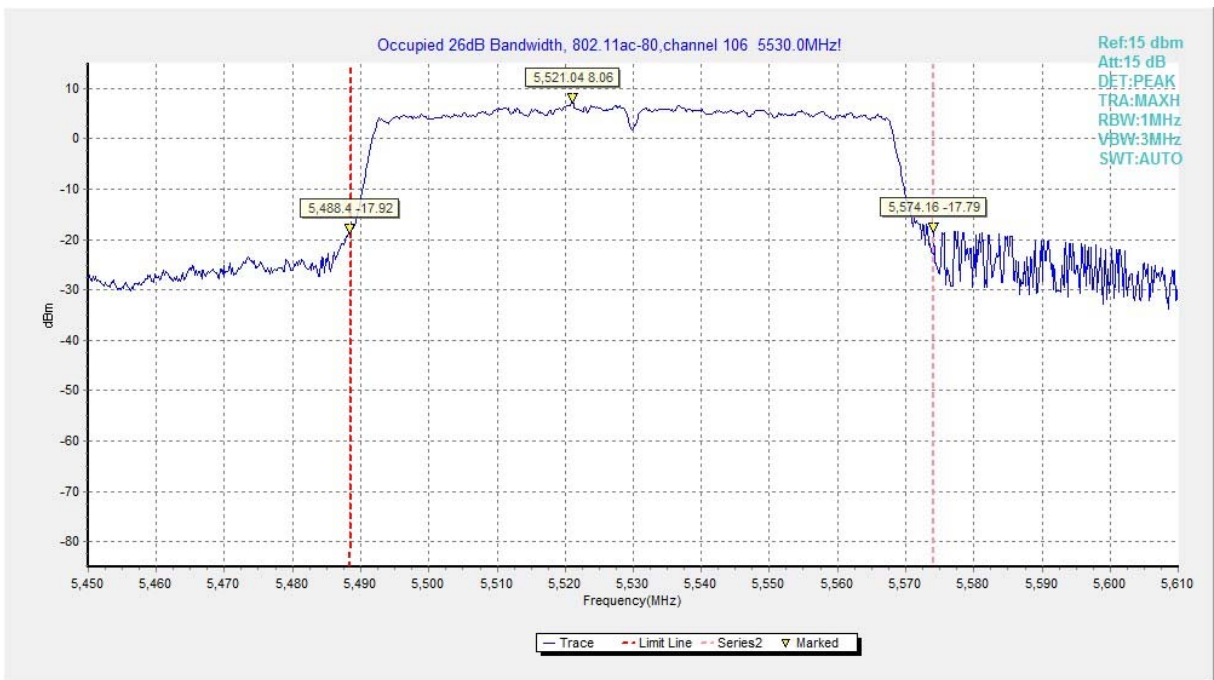


Fig.44 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

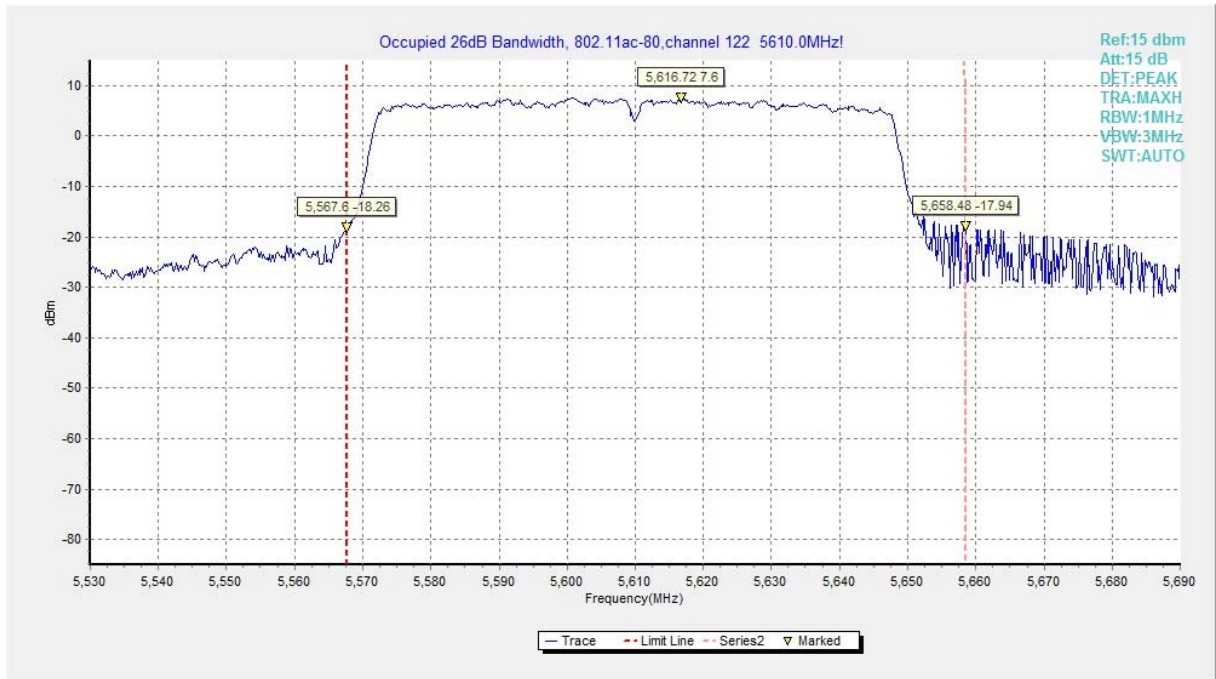


Fig.45 Occupied 26dB Bandwidth (802.11ac-HT80, 5610MHz)

A.5. Band Edges Compliance

A5.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit (dB μ V/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to KDB 789033

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)).

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.46	P
	5320 MHz	Fig.47	P
	5500 MHz	Fig.48	P
	5700 MHz	Fig.49	P
802.11n HT20	5180 MHz	Fig.50	P
	5320 MHz	Fig.51	P
	5500 MHz	Fig.52	P
	5700 MHz	Fig.53	P
802.11ac HT20	5180 MHz	Fig.54	P
	5320 MHz	Fig.55	P
	5500 MHz	Fig.56	P
	5700 MHz	Fig.57	P
802.11n HT40	5190 MHz	Fig.58	P
	5310 MHz	Fig.59	P
	5510 MHz	Fig.60	P
	5670 MHz	Fig.61	P
802.11ac HT40	5190 MHz	Fig.62	P
	5310 MHz	Fig.63	P
	5510 MHz	Fig.64	P
	5670 MHz	Fig.65	P
802.11ac HT80	5210MHz	Fig.66	P
	5290MHz	Fig.67	P
	5530MHz	Fig.68	P

Conclusion: PASS

Test graphs as below:

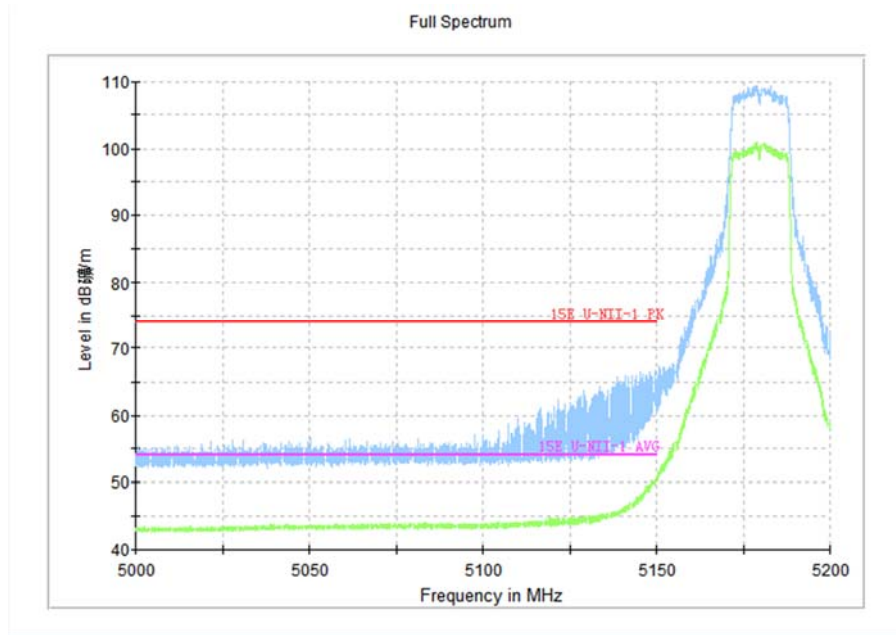


Fig.46 Band Edges (802.11a, 5180MHz)

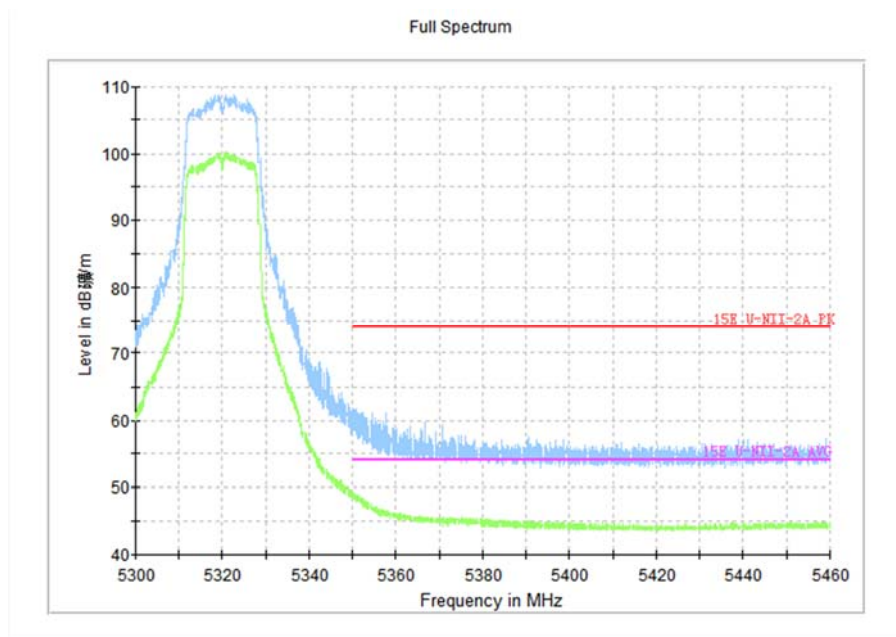


Fig.47 Band Edges (802.11a, 5320MHz)

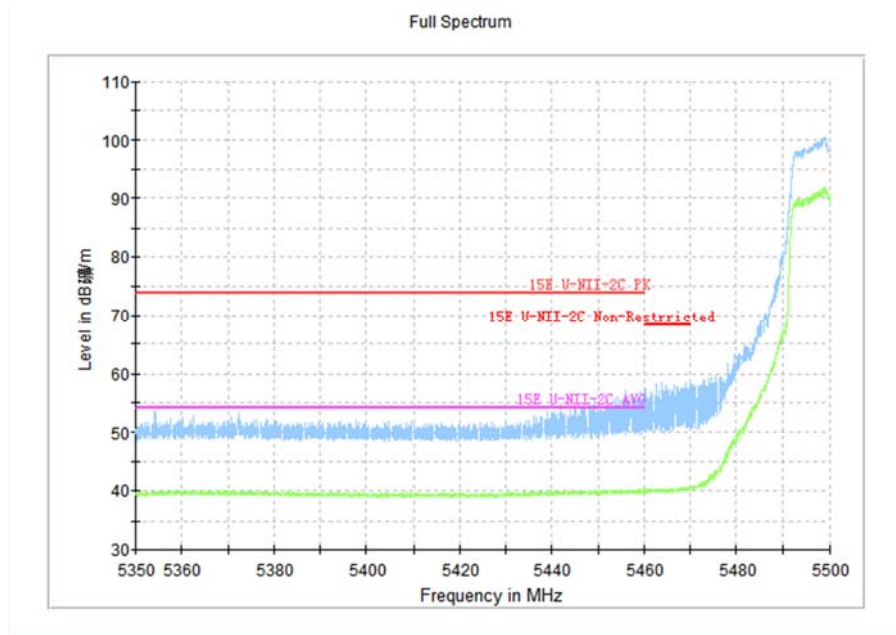


Fig.48 Band Edges (802.11a, 5500MHz)

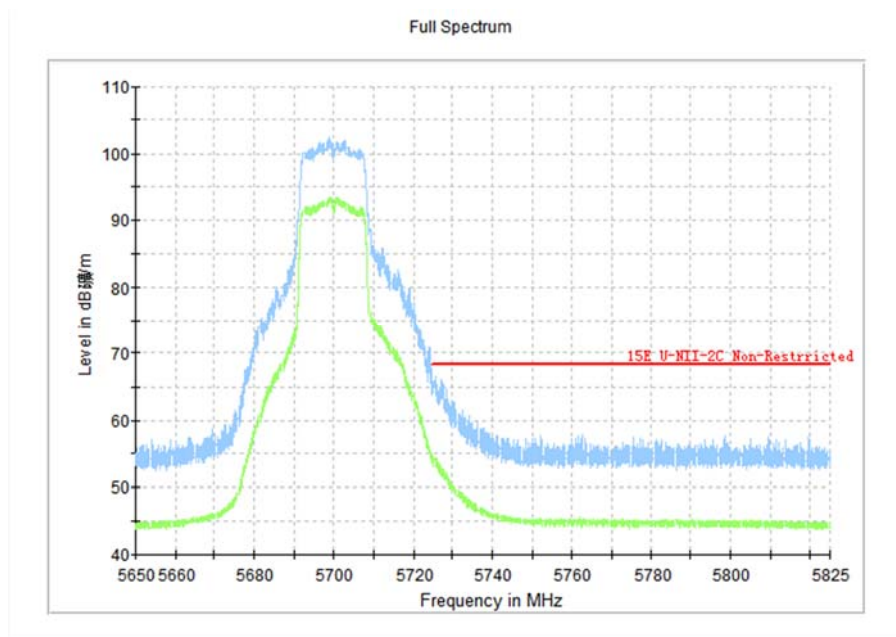


Fig.49 Band Edges (802.11a, 5700MHz)

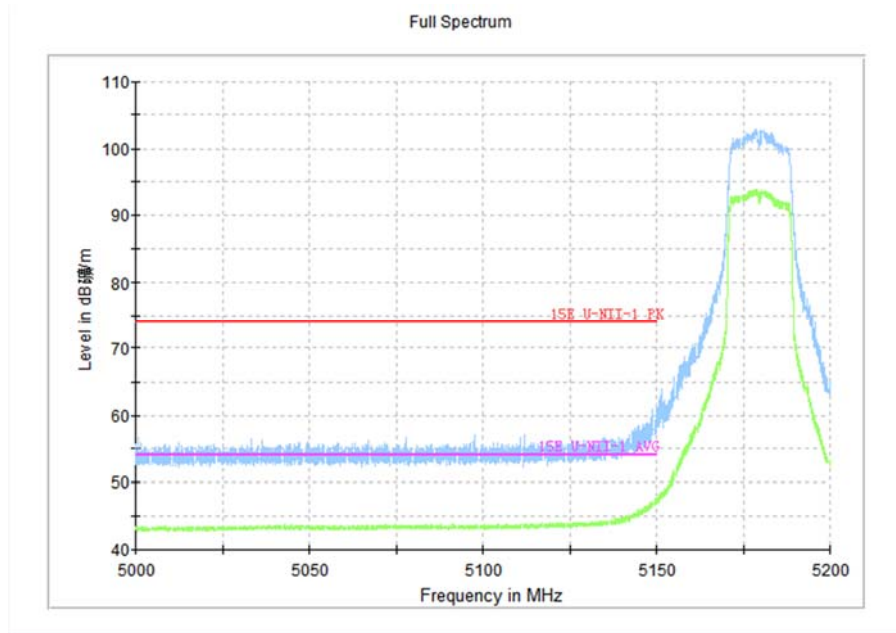


Fig.50 Band Edges (802.11n-HT20, 5180MHz)

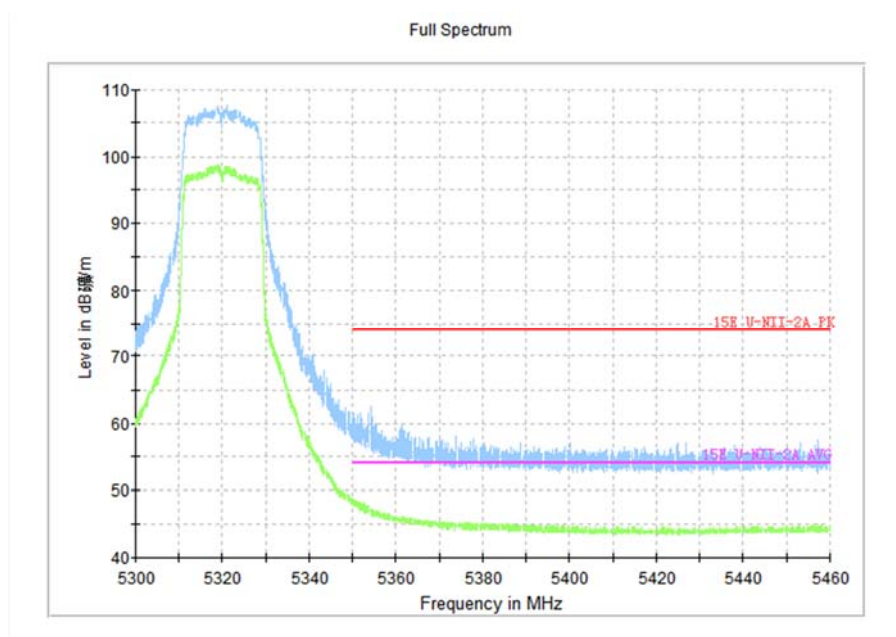


Fig.51 Band Edges (802.11n-HT20, 5320MHz)

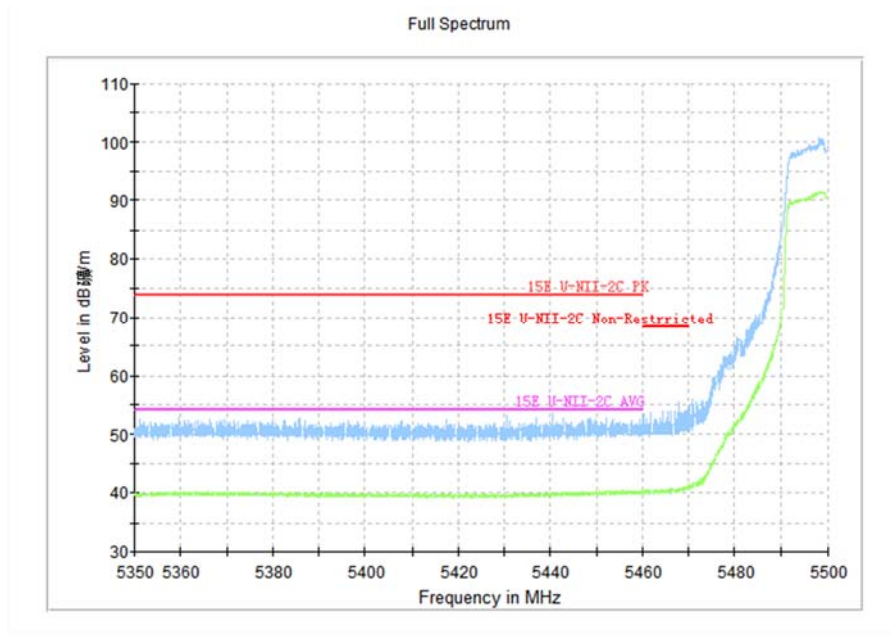


Fig.52 Band Edges (802.11n-HT20, 5500MHz)

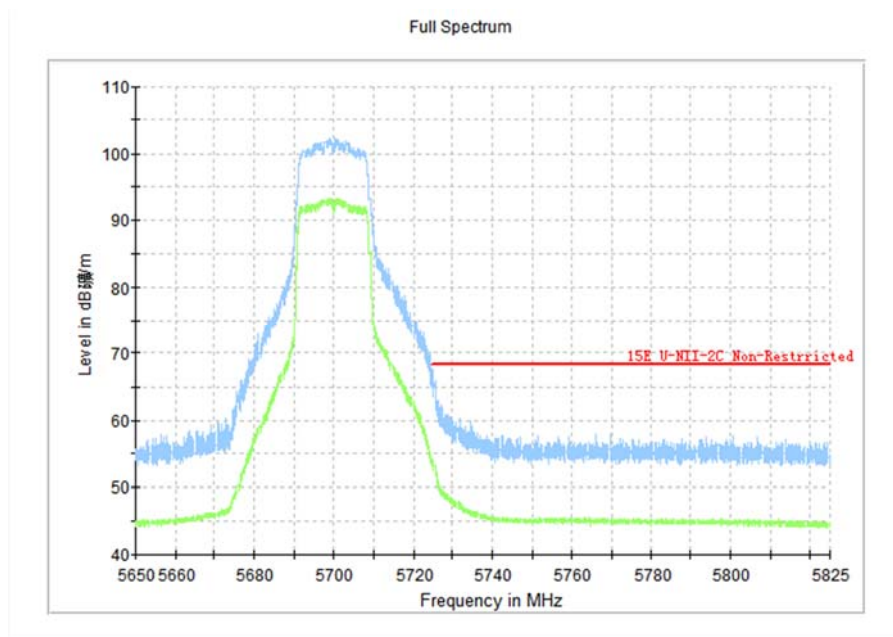


Fig.53 Band Edges (802.11n-HT20, 5700MHz)

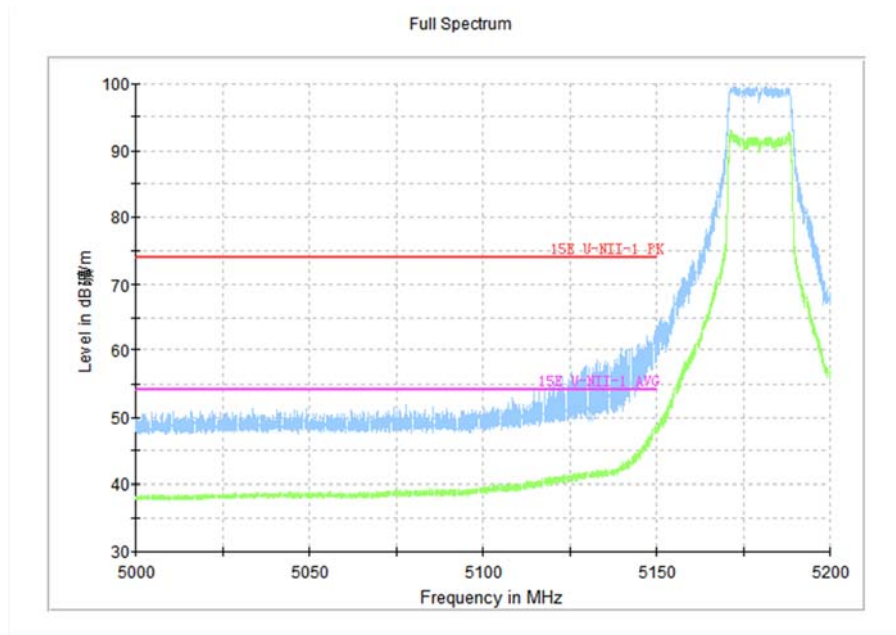


Fig.54 Band Edges (802.11ac-HT20, 5180MHz)

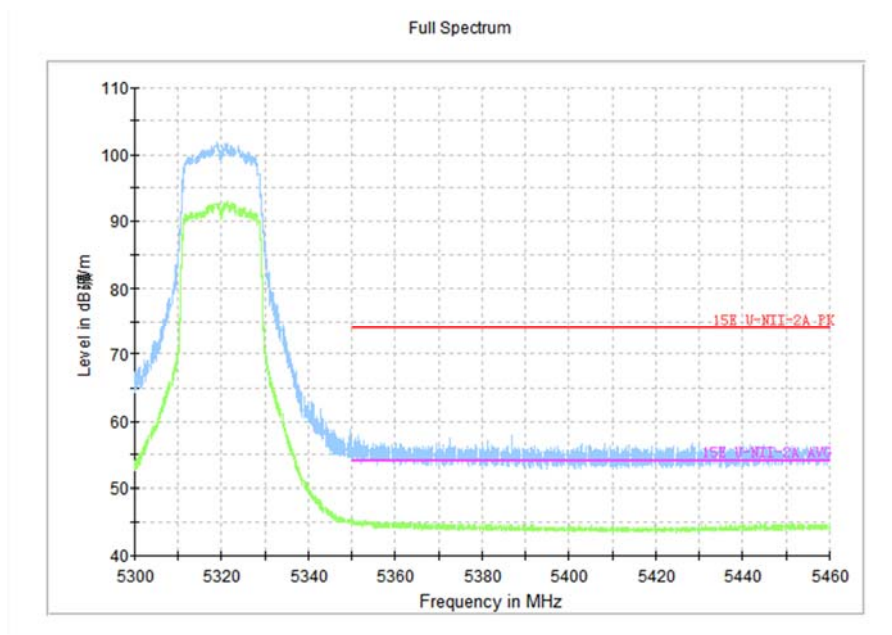


Fig.55 Band Edges (802.11ac-HT20, 5320MHz)

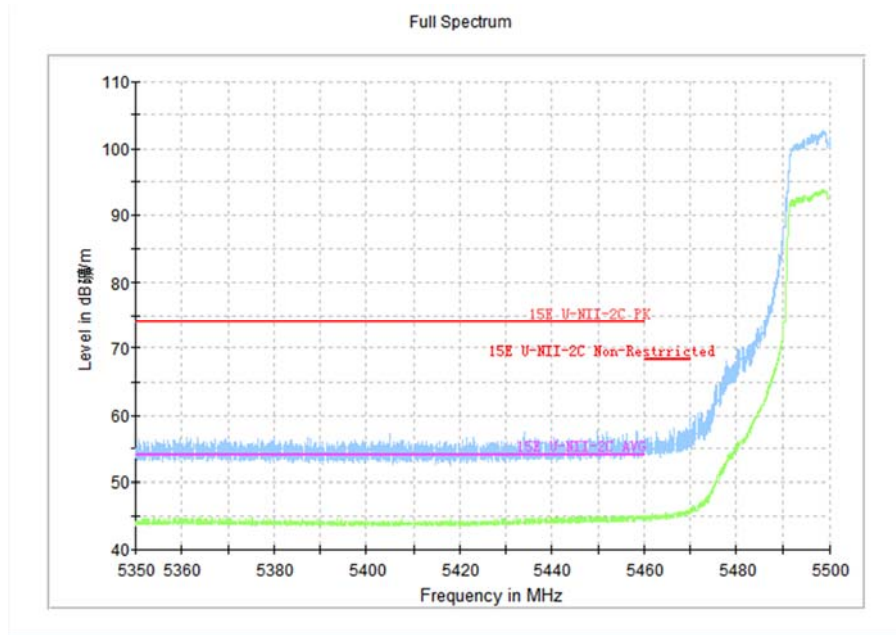


Fig.56 Band Edges (802.11ac-HT20, 5500MHz)

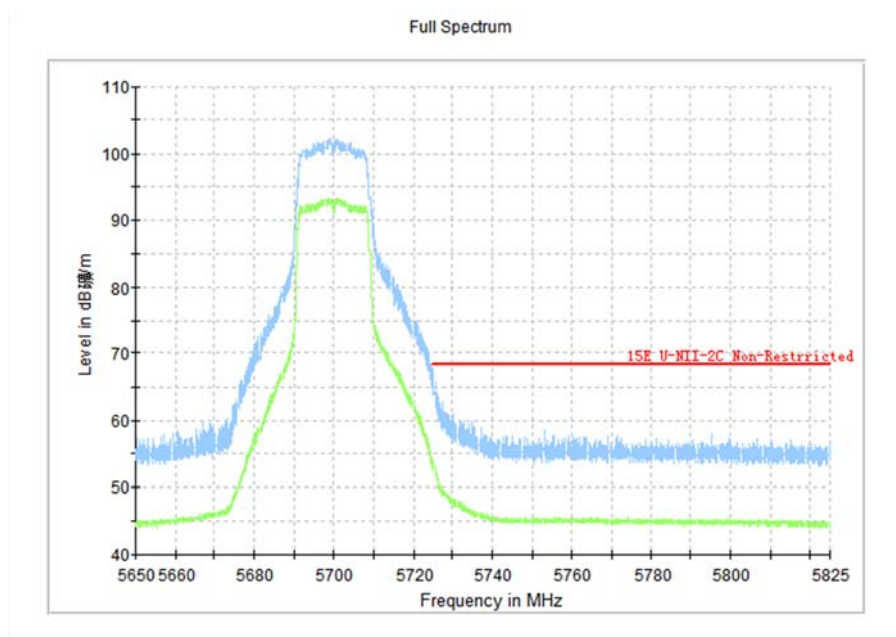


Fig.57 Band Edges (802.11ac-HT20, 5700MHz)

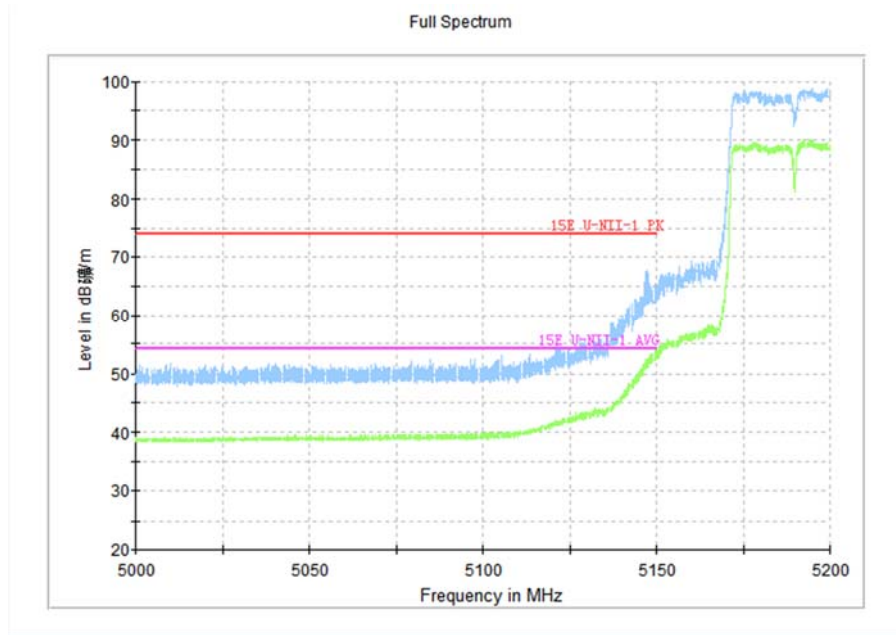


Fig.58 Band Edges (802.11n-HT40, 5190MHz)

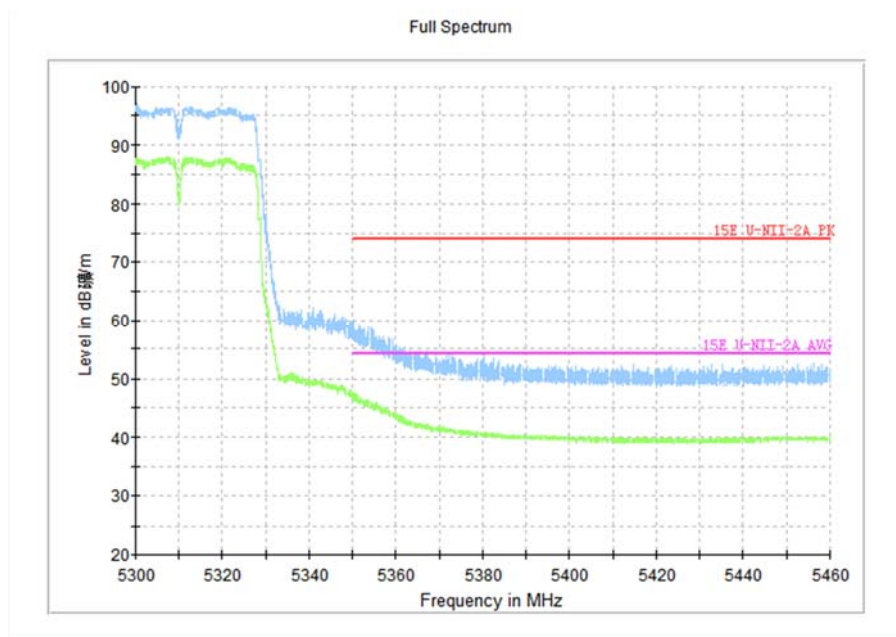


Fig.59 Band Edges (802.11n-HT40, 5310MHz)

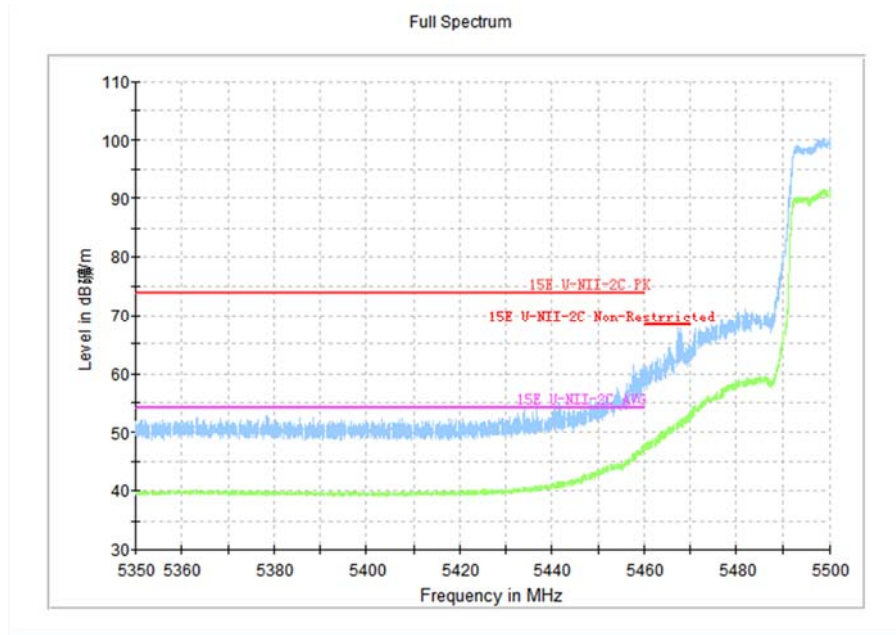


Fig.60 Band Edges (802.11n-HT40, 5510MHz)

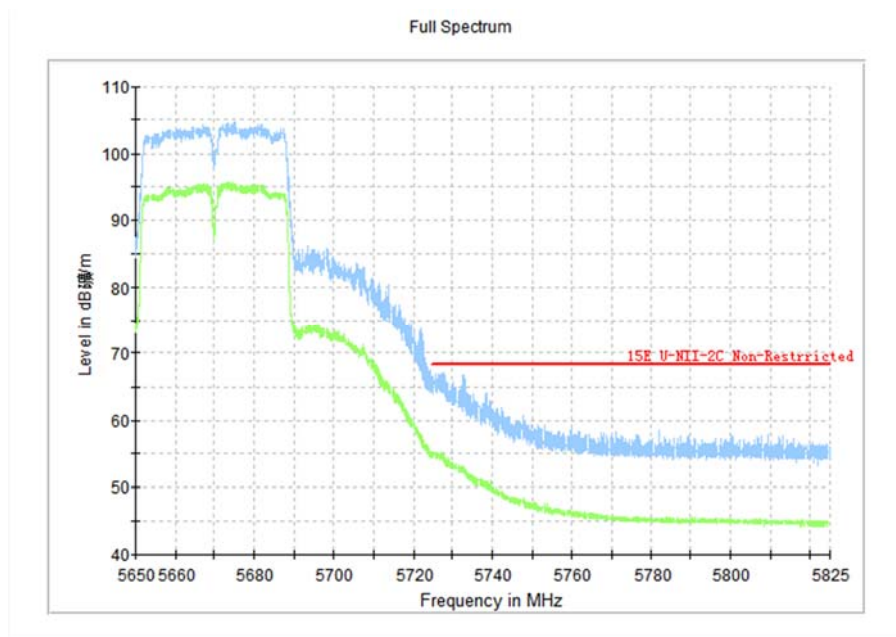


Fig.61 Band Edges (802.11n-HT40, 5670MHz)

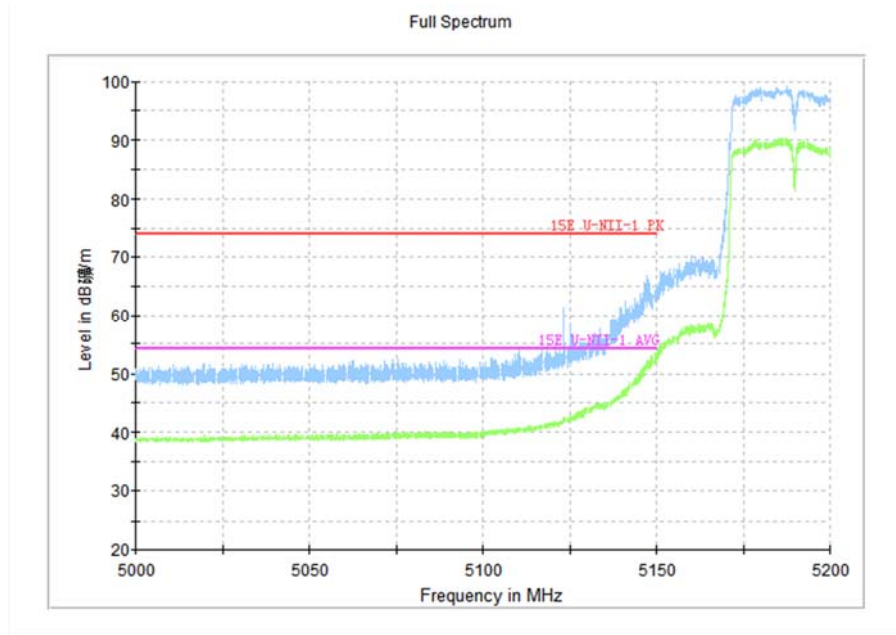


Fig.62 Band Edges (802.11ac-HT40, 5190MHz)

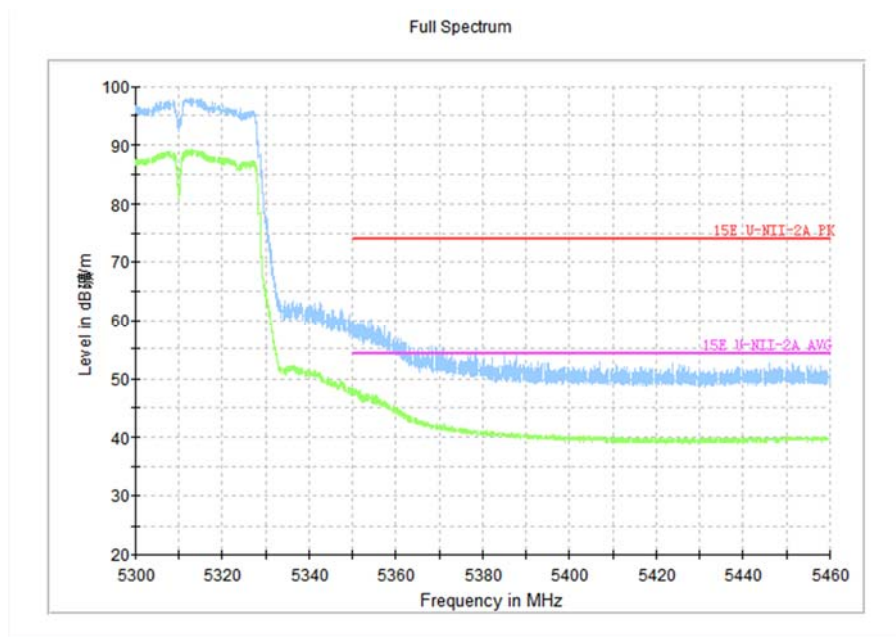


Fig.63 Band Edges (802.11ac-HT40, 5310MHz)

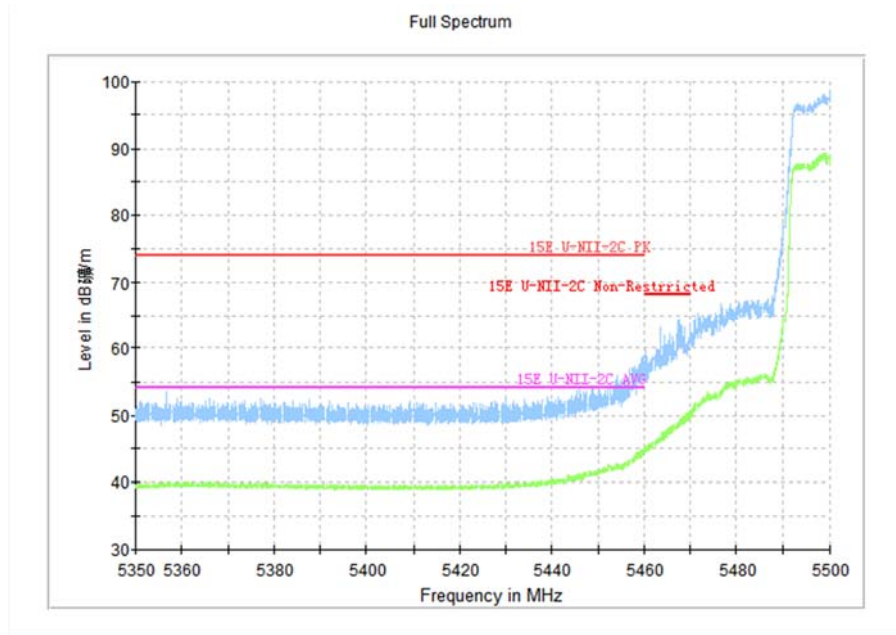


Fig.64 Band Edges (802.11ac-HT40, 5510MHz)

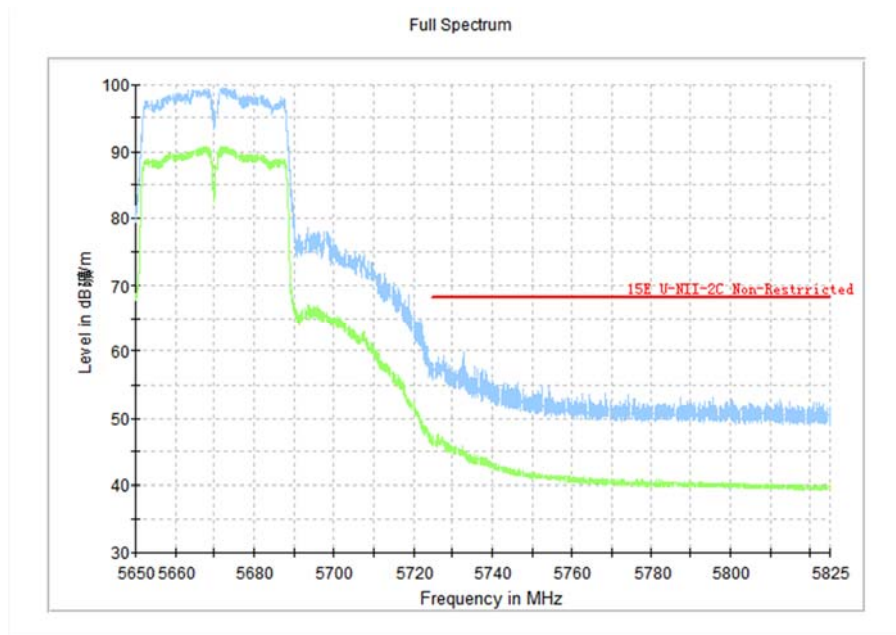


Fig.65 Band Edges (802.11ac-HT40, 5670MHz)

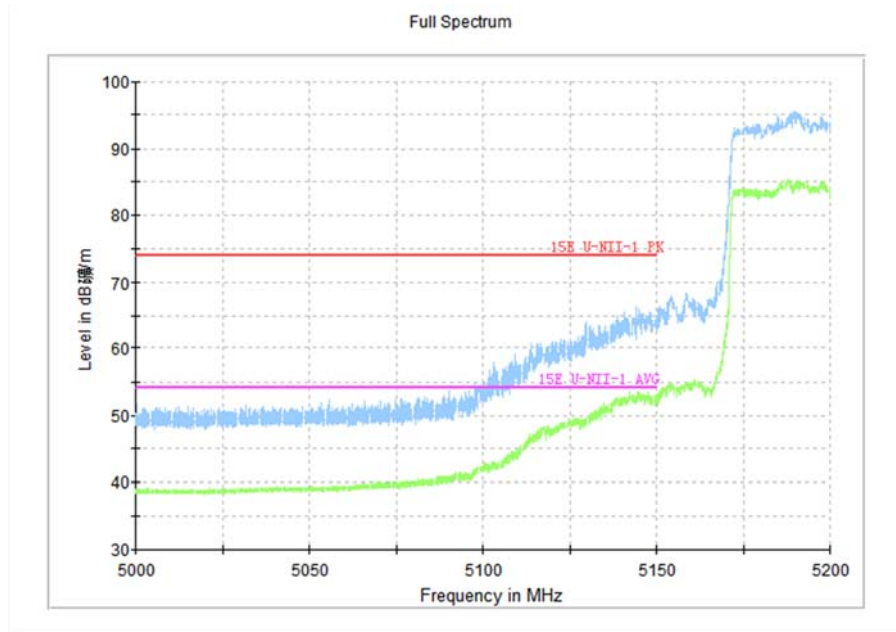


Fig.66 Band Edges (802.11ac-HT80, 5210MHz)

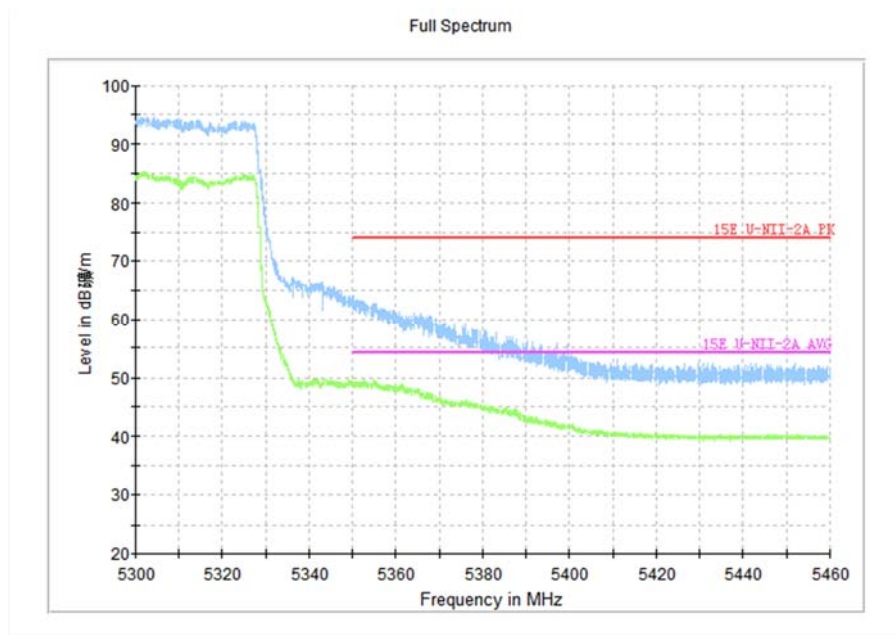


Fig.67 Band Edges (802.11ac-HT80, 5290MHz)

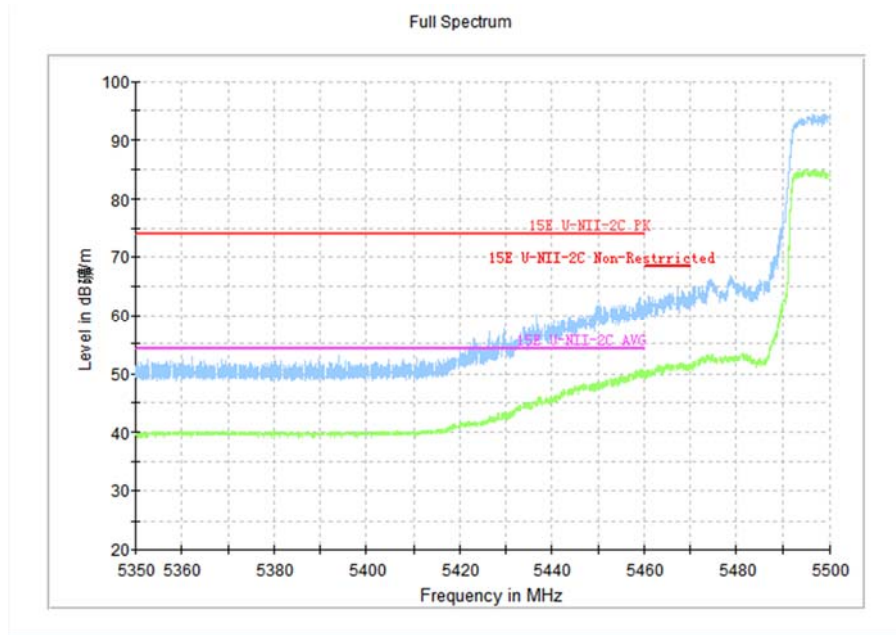


Fig.68 Band Edges (802.11ac-HT80, 5530MHz)

A.6. Transmitter Spurious Emission

Measurement Limit:

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

The measurement is made according to KDB 789033

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(dB μ V/m)	Measurement distance(m)
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

Measurement Results:

Conclusion: PASS

Note:

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

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

The measurement results are obtained as described below:

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

Peak
802.11a

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11a Channel 36							
17954.9	57.5	-25.5	46.7	36.3	H	74	16.5
17984.6	57.4	-25.5	46.7	36.2	H	74	16.6
17990.1	57.4	-25.5	46.7	36.2	V	74	16.6
17985.7	57.1	-25.5	46.7	35.9	H	74	16.9
17986.8	57.1	-25.5	46.7	35.9	V	74	16.9
5149.5	66.7	-17	33.7	50	V	74	7.3
802.11a Channel 40							
17984.6	58.1	-25.5	46.7	36.9	V	74	15.9
17995.6	57.4	-25.5	46.7	36.2	V	74	16.6
17975.8	57.3	-25.5	46.7	36.1	H	74	16.7
17901	56.6	-25.5	46.7	35.4	H	74	17.4
17981.3	56.6	-25.5	46.7	35.4	H	74	17.4
17993.4	56.6	-25.5	46.7	35.4	H	74	17.4
802.11a Channel 48							
17996.7	57.6	-25.5	46.7	36.4	H	74	16.4
17995.6	57.5	-25.5	46.7	36.3	V	74	16.5
17997.8	57.5	-25.5	46.7	36.3	V	74	16.5
17972.5	57.3	-25.5	46.7	36.1	V	74	16.7
17992.3	57.2	-25.5	46.7	36	H	74	16.8
17963.7	56.9	-25.5	46.7	35.7	H	74	17.1
802.11a Channel 52							
17991.2	57.6	-25.5	46.7	36.4	H	74	16.4
17989	57.5	-25.5	46.7	36.3	V	74	16.5
17986.8	57.1	-25.5	46.7	35.9	V	74	16.9
17979.1	56.9	-25.5	46.7	35.7	V	74	17.1
17992.3	56.9	-25.5	46.7	35.7	H	74	17.1
17981.3	56.6	-25.5	46.7	35.4	V	74	17.4
802.11a Channel 56							
17995.6	57.6	-25.5	46.7	36.4	V	74	16.4
17982.4	57.2	-25.5	46.7	36	V	74	16.8
17986.8	57.1	-25.5	46.7	35.9	H	74	16.9
17968.1	57	-25.5	46.7	35.8	V	74	17
17994.5	57	-25.5	46.7	35.8	H	74	17
17969.2	56.9	-25.5	46.7	35.7	V	74	17.1

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11a Channel 64							
17919.7	57.4		-25.5	46.7	36.2V	74	16.6
17997.8	57.3		-25.5	46.7	36.1H	74	16.7
17991.2	57.2		-25.5	46.7	36V	74	16.8
17945	57		-25.5	46.7	35.8H	74	17
17996.7	57		-25.5	46.7	35.8V	74	17
5350.3	61.8		-16.9	34	44.7H	74	12.2
802.11a Channel 100							
17904.3	59.1		-25.5	46.7	37.9V	74	14.9
17968.1	57.8		-25.5	46.7	36.6V	74	16.2
17981.3	57.7		-25.5	46.7	36.5V	74	16.3
17997.8	57.6		-25.5	46.7	36.4H	74	16.4
17992.3	57.5		-25.5	46.7	36.3V	74	16.5
5459.9	57.5		-16.8	34.2	40.1H	74	16.5
802.11a Channel 120							
17991.2	57.3		-25.5	46.7	36.1H	74	16.7
17985.7	57.1		-25.5	46.7	35.9H	74	16.9
17979.1	56.8		-25.5	46.7	35.6V	74	17.2
17995.6	56.8		-25.5	46.7	35.6H	74	17.2
17993.4	56.7		-25.5	46.7	35.5H	74	17.3
17901	56.6		-25.5	46.7	35.4H	74	17.4
802.11a Channel 140							
17976.9	58		-25.5	46.7	36.8H	74	16
17984.6	57.2		-25.5	46.7	36V	74	16.8
17979.1	56.9		-25.5	46.7	35.7V	74	17.1
17992.3	56.9		-25.5	46.7	35.7V	74	17.1
17990.1	56.7		-25.5	46.7	35.5V	74	17.3
5725.4	66.4		-16.3	34.3	48.4H	74	7.6

802.11n-HT20

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n Channel 36							
17994.5	58.3	-25.5	46.7	37.1	V	74	15.7
17976.9	57.2	-25.5	46.7	36	H	74	16.8
17993.4	57.2	-25.5	46.7	36	H	74	16.8
17908.7	56.9	-25.5	46.7	35.7	H	74	17.1
17936.2	56.8	-25.5	46.7	35.6	V	74	17.2
5149.2	60.8	-17	33.7	44.1	V	74	13.2
802.11n Channel 40							
17989	57.9	-25.5	46.7	36.7	H	74	16.1
17997.8	57.3	-25.5	46.7	36.1	H	74	16.7
17992.3	57.1	-25.5	46.7	35.9	H	74	16.9
17978	56.9	-25.5	46.7	35.7	H	74	17.1
17869.1	56.8	-25.5	46.7	35.6	V	74	17.2
17954.9	56.7	-25.5	46.7	35.5	H	74	17.3
802.11n Channel 48							
17991.2	57.7	-25.5	46.7	36.5	H	74	16.3
17989	57	-25.5	46.7	35.8	H	74	17
17886.7	56.8	-25.5	46.7	35.6	V	74	17.2
17987.9	56.6	-25.5	46.7	35.4	H	74	17.4
17993.4	56.6	-25.5	46.7	35.4	V	74	17.4
17995.6	56.6	-25.5	46.7	35.4	V	74	17.4
802.11n Channel 52							
17981.3	57.4	-25.5	46.7	36.2	H	74	16.6
17990.1	56.9	-25.5	46.7	35.7	V	74	17.1
17980.2	56.6	-25.5	46.7	35.4	H	74	17.4
17984.6	56.6	-25.5	46.7	35.4	V	74	17.4
17991.2	56.6	-25.5	46.7	35.4	H	74	17.4
17979.1	56.5	-25.5	46.7	35.3	H	74	17.5
802.11n Channel 56							
17975.8	57.8	-25.5	46.7	36.6	H	74	16.2
17997.8	57.7	-25.5	46.7	36.5	H	74	16.3
17996.7	57.6	-25.5	46.7	36.4	H	74	16.4
17991.2	57.1	-25.5	46.7	35.9	H	74	16.9
17986.8	57	-25.5	46.7	35.8	H	74	17
17894.4	56.5	-25.5	46.7	35.3	H	74	17.5

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11n Channel 64							
17984.6	58.3	-25.5	46.7	37.1	H	74	15.7
17997.8	57.2	-25.5	46.7	36	V	74	16.8
17992.3	57.1	-25.5	46.7	35.9	V	74	16.9
17996.7	56.8	-25.5	46.7	35.6	H	74	17.2
17964.8	56.7	-25.5	46.7	35.5	V	74	17.3
5354.3	62.5	-16.9	34	45.4	H	74	11.5
802.11n Channel 100							
17997.8	57.4	-25.5	46.7	36.2	V	74	16.6
17942.8	57.2	-25.5	46.7	36	H	74	16.8
17980.2	56.9	-25.5	46.7	35.7	V	74	17.1
17991.2	56.9	-25.5	46.7	35.7	H	74	17.1
17981.3	56.8	-25.5	46.7	35.6	V	74	17.2
5452.3	52.9	-16.8	34.2	35.5	H	74	21.1
802.11n Channel 120							
17899.9	57.3	-25.5	46.7	36.1	V	74	16.7
17985.7	57	-25.5	46.7	35.8	V	74	17
17991.2	56.8	-25.5	46.7	35.6	V	74	17.2
17994.5	56.8	-25.5	46.7	35.6	H	74	17.2
17978	56.6	-25.5	46.7	35.4	V	74	17.4
17890	56.5	-25.5	46.7	35.3	H	74	17.5
802.11n Channel 140							
17975.8	57.6	-25.5	46.7	36.4	V	74	16.4
17986.8	56.9	-25.5	46.7	35.7	V	74	17.1
17997.8	56.7	-25.5	46.7	35.5	V	74	17.3
17853.7	56.6	-25.5	46.7	35.4	V	74	17.4
17905.4	56.6	-25.5	46.7	35.4	H	74	17.4
5725	67.6	-16.3	34.3	49.6	H	74	6.4

802.11ac-HT20

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac Channel 36							
17875.7	57.1	-25.5	46.7	35.9	V	74	16.9
17993.4	56.8	-25.5	46.7	35.6	H	74	17.2
17985.7	56.7	-25.5	46.7	35.5	V	74	17.3
17991.2	56.7	-25.5	46.7	35.5	H	74	17.3
17984.6	56.6	-25.5	46.7	35.4	H	74	17.4
5149.4	62.9	-17	33.7	46.2	H	74	11.1
802.11ac Channel 40							
17990.1	57.5	-25.5	46.7	36.3	H	74	16.5
17983.5	56.8	-25.5	46.7	35.6	H	74	17.2
17993.4	56.7	-25.5	46.7	35.5	H	74	17.3
17959.3	56.6	-25.5	46.7	35.4	V	74	17.4
17891.1	56.5	-25.5	46.7	35.3	V	74	17.5
17894.4	56.5	-25.5	46.7	35.3	H	74	17.5
802.11ac Channel 48							
17995.6	58.4	-25.5	46.7	37.2	H	74	15.6
17978	57.2	-25.5	46.7	36	H	74	16.8
17964.8	57.1	-25.5	46.7	35.9	H	74	16.9
17968.1	57.1	-25.5	46.7	35.9	V	74	16.9
17983.5	56.7	-25.5	46.7	35.5	H	74	17.3
17987.9	56.7	-25.5	46.7	35.5	V	74	17.3
802.11ac Channel 52							
17884.5	57.7	-25.5	46.7	36.5	H	74	16.3
17994.5	57.5	-25.5	46.7	36.3	H	74	16.5
17869.1	57	-25.5	46.7	35.8	H	74	17
17967	56.8	-25.5	46.7	35.6	V	74	17.2
17982.4	56.6	-25.5	46.7	35.4	H	74	17.4
17987.9	56.6	-25.5	46.7	35.4	V	74	17.4
802.11ac Channel 56							
17898.8	57.7	-25.5	46.7	36.5	H	74	16.3
17995.6	57.4	-25.5	46.7	36.2	V	74	16.6
17989	57.3	-25.5	46.7	36.1	V	74	16.7
17982.4	57.1	-25.5	46.7	35.9	V	74	16.9
17993.4	56.9	-25.5	46.7	35.7	V	74	17.1
17884.5	56.8	-25.5	46.7	35.6	V	74	17.2

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac Channel 64							
17992.3	57.5	-25.5	46.7	36.3	V	74	16.5
17975.8	56.8	-25.5	46.7	35.6	H	74	17.2
17995.6	56.8	-25.5	46.7	35.6	H	74	17.2
17982.4	56.7	-25.5	46.7	35.5	V	74	17.3
17961.5	56.5	-25.5	46.7	35.3	H	74	17.5
5351.4	57.9	-16.9	34	40.8	H	74	16.1
802.11ac Channel 100							
17983.5	57.4	-25.5	46.7	36.2	H	74	16.6
17995.6	57.1	-25.5	46.7	35.9	H	74	16.9
17904.3	57	-25.5	46.7	35.8	H	74	17
17981.3	56.7	-25.5	46.7	35.5	V	74	17.3
17797.6	56.6	-25.5	46.7	35.4	V	74	17.4
5458.2	57.6	-16.8	34.2	40.2	H	74	16.4
802.11ac Channel 120							
17969.2	57.1	-25.5	46.7	35.9	H	74	16.9
17989	57	-25.5	46.7	35.8	H	74	17
17981.3	56.8	-25.5	46.7	35.6	V	74	17.2
17983.5	56.8	-25.5	46.7	35.6	V	74	17.2
17991.2	56.8	-25.5	46.7	35.6	V	74	17.2
17984.6	56.7	-25.5	46.7	35.5	V	74	17.3
802.11ac Channel 140							
17885.6	57.3	-25.5	46.7	36.1	V	74	16.7
17973.6	57.2	-25.5	46.7	36	V	74	16.8
17976.9	57.2	-25.5	46.7	36	V	74	16.8
17989	56.9	-25.5	46.7	35.7	H	74	17.1
17979.1	56.7	-25.5	46.7	35.5	V	74	17.3
5725.1	67.7	-16.3	34.3	49.7	H	74	6.3

802.11n-HT40

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n 40MHz Channel38							
17990.1	57.3	-25.5	46.7	36.1	V	74	16.7
17986.8	57	-25.5	46.7	35.8	V	74	17
17995.6	56.9	-25.5	46.7	35.7	V	74	17.1
17994.5	56.7	-25.5	46.7	35.5	V	74	17.3
17982.4	56.6	-25.5	46.7	35.4	V	74	17.4
5147.3	67.8	-17	33.7	51.1	H	74	6.2
802.11n 40MHz Channel46							
17987.9	57.9	-25.5	46.7	36.7	V	74	16.1
17989	57.1	-25.5	46.7	35.9	H	74	16.9
17905.4	56.9	-25.5	46.7	35.7	V	74	17.1
17877.9	56.8	-25.5	46.7	35.6	V	74	17.2
17973.6	56.7	-25.5	46.7	35.5	H	74	17.3
17981.3	56.7	-25.5	46.7	35.5	H	74	17.3
802.11n 40MHz Channel54							
17992.3	58.3	-25.5	46.7	37.1	V	74	15.7
17993.4	57.9	-25.5	46.7	36.7	H	74	16.1
17985.7	56.5	-25.5	46.7	35.3	H	74	17.5
17991.2	56.5	-25.5	46.7	35.3	V	74	17.5
17976.9	56.4	-25.5	46.7	35.2	V	74	17.6
17975.8	56.3	-25.5	46.7	35.1	V	74	17.7
802.11n 40MHz Channel62							
17992.3	57.6	-25.5	46.7	36.4	V	74	16.4
17996.7	57.4	-25.5	46.7	36.2	H	74	16.6
17958.2	56.9	-25.5	46.7	35.7	H	74	17.1
17984.6	56.9	-25.5	46.7	35.7	V	74	17.1
17930.7	56.6	-25.5	46.7	35.4	H	74	17.4
5350.3	60.3	-16.9	34	43.2	V	74	13.7
802.11n 40MHz Channel102							
17993.4	57.2	-25.5	46.7	36	V	74	16.8
17990.1	56.6	-25.5	46.7	35.4	H	74	17.4
17963.7	56.4	-25.5	46.7	35.2	V	74	17.6
17979.1	56.4	-25.5	46.7	35.2	H	74	17.6
17985.7	56.3	-25.5	46.7	35.1	V	74	17.7
5457.4	61.4	-16.8	34.2	44	H	74	12.6

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11n 40MHz Channel118							
17995.6	57.2	-25.5	46.7	36	H	74	16.8
17991.2	57	-25.5	46.7	35.8	V	74	17
17994.5	56.7	-25.5	46.7	35.5	V	74	17.3
17909.8	56.6	-25.5	46.7	35.4	V	74	17.4
17986.8	56.6	-25.5	46.7	35.4	H	74	17.4
17989	56.5	-25.5	46.7	35.3	H	74	17.5
802.11n 40MHz Channel134							
17989	57.3	-25.5	46.7	36.1	V	74	16.7
17978	57.1	-25.5	46.7	35.9	H	74	16.9
17984.6	57.1	-25.5	46.7	35.9	V	74	16.9
17892.2	56.8	-25.5	46.7	35.6	V	74	17.2
17982.4	56.8	-25.5	46.7	35.6	H	74	17.2
5727.6	67	-16.3	34.3	49	H	74	7

802.11ac-HT40

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 40M Channel:CH38							
17991.2	57.7	-25.5	46.7	36.5	H	74	16.3
17976.9	57.5	-25.5	46.7	36.3	H	74	16.5
17983.5	57.3	-25.5	46.7	36.1	H	74	16.7
17996.7	57.2	-25.5	46.7	36	V	74	16.8
17993.4	56.9	-25.5	46.7	35.7	V	74	17.1
5147.7	66.8	-17	33.7	50.1	H	74	7.2
802.11ac 40M Channel:CH46							
17992.3	57.6	-25.5	46.7	36.4	V	74	16.4
17996.7	57.5	-25.5	46.7	36.3	H	74	16.5
17979.1	57.3	-25.5	46.7	36.1	V	74	16.7
17994.5	57.2	-25.5	46.7	36	H	74	16.8
17899.9	56.9	-25.5	46.7	35.7	H	74	17.1
17954.9	56.9	-25.5	46.7	35.7	H	74	17.1
802.11ac 40M Channel:CH54							
17905.4	56.8	-25.5	46.7	35.6	V	74	17.2
17979.1	56.8	-25.5	46.7	35.6	V	74	17.2
17885.6	56.7	-25.5	46.7	35.5	V	74	17.3

17995.6	56.7	-25.5	46.7	35.5	V	74	17.3
17872.4	56.6	-25.5	46.7	35.4	H	74	17.4
17976.9	56.5	-25.5	46.7	35.3	V	74	17.5
802.11ac 40M Channel:CH62							
17995.6	57.3	-25.5	46.7	36.1	H	74	16.7
17873.5	57.1	-25.5	46.7	35.9	V	74	16.9
17989	56.9	-25.5	46.7	35.7	V	74	17.1
17980.2	56.8	-25.5	46.7	35.6	H	74	17.2
17884.5	56.6	-25.5	46.7	35.4	H	74	17.4
5354.1	60.2	-16.9	34	43.1	H	74	13.8
802.11ac 40M Channel:CH102							
17962.6	57	-25.5	46.7	35.8	H	74	17
17991.2	56.9	-25.5	46.7	35.7	V	75	18.1
17995.6	56.9	-25.5	46.7	35.7	H	76	19.1
17887.8	56.8	-25.5	46.7	35.6	H	77	20.2
17880.1	56.6	-25.5	46.7	35.4	H	78	21.4
5459.6	58.7	-16.8	34.2	41.3	H	79	20.3

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 40M Channel:CH118							
17995.6	57.3	-25.5	46.7	36.1	H	74	16.7
17910.9	57	-25.5	46.7	35.8	H	74	17
17987.9	56.9	-25.5	46.7	35.7	V	74	17.1
17997.8	56.8	-25.5	46.7	35.6	H	74	17.2
17883.4	56.7	-25.5	46.7	35.5	V	74	17.3
17981.3	56.5	-25.5	46.7	35.3	V	74	17.5
802.11ac 40M Channel:CH134							
17995.6	57.6	-25.5	46.7	36.4	V	74	16.4
17997.8	57.4	-25.5	46.7	36.2	V	74	16.6
17994.5	57.1	-25.5	46.7	35.9	H	74	16.9
17896.6	57	-25.5	46.7	35.8	H	74	17
17991.2	56.9	-25.5	46.7	35.7	V	74	17.1
5732.7	59.8	-16.3	34.3	41.8	H	74	14.2

802.11ac-HT80

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 80M Channel:CH42							
17960.4	57.2	-25.5	46.7	36	V	74	16.8
17991.2	56.5	-25.5	46.7	35.3	V	74	17.5
17915.3	56.3	-25.5	46.7	35.1	V	74	17.7
17996.7	56.3	-25.5	46.7	35.1	H	74	17.7
17876.8	56.1	-25.5	46.7	34.9	H	74	17.9
5144.3	66.4	-17	33.7	49.7	V	74	7.6
802.11ac 80M Channel:CH58							
17973.6	57.5	-25.5	46.7	36.3	H	74	16.5
17984.6	57.2	-25.5	46.7	36	H	74	16.8
17993.4	57.2	-25.5	46.7	36	V	74	16.8
17995.6	57.2	-25.5	46.7	36	V	74	16.8
17991.2	56.9	-25.5	46.7	35.7	H	74	17.1
5350.3	64.2	-16.9	34	47.1	H	74	9.8
802.11ac 80M Channel:CH106							
17995.6	57	-25.5	46.7	35.8	V	74	17
17973.6	56.9	-25.5	46.7	35.7	V	74	17.1
17978	56.4	-25.5	46.7	35.2	H	74	17.6
17983.5	56.3	-25.5	46.7	35.1	V	74	17.7
17990.1	56.3	-25.5	46.7	35.1	V	74	17.7
5459	63.1	-16.8	34.2	45.7	V	74	10.9

Average
802.11a

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11a Channel:CH36							
17983.5	46	-25.5	46.7	24.8	H	54	8
17995.6	45.9	-25.5	46.7	24.7	H	54	8.1
17997.8	45.9	-25.5	46.7	24.7	V	54	8.1
17992.3	45.8	-25.5	46.7	24.6	V	54	8.2
17994.5	45.8	-25.5	46.7	24.6	H	54	8.2
5149.9	50.8	-17	33.7	34.1	V	54	3.2
802.11a Channel:CH40							
17985.7	45.8	-25.5	46.7	24.6	V	54	8.2
17992.3	45.8	-25.5	46.7	24.6	V	54	8.2
17989	45.7	-25.5	46.7	24.5	V	54	8.3
17994.5	45.7	-25.5	46.7	24.5	V	54	8.3
17997.8	45.7	-25.5	46.7	24.5	H	54	8.3
17991.2	45.6	-25.5	46.7	24.4	H	54	8.4
802.11a Channel:CH48							
17982.4	46	-25.5	46.7	24.8	V	54	8
17996.7	45.9	-25.5	46.7	24.7	H	54	8.1
17992.3	45.7	-25.5	46.7	24.5	H	54	8.3
17993.4	45.6	-25.5	46.7	24.4	H	54	8.4
17994.5	45.5	-25.5	46.7	24.3	H	54	8.5
17997.8	45.5	-25.5	46.7	24.3	V	54	8.5
802.11a Channel:CH52							
17987.9	45.8	-25.5	46.7	24.6	V	54	8.2
17994.5	45.8	-25.5	46.7	24.6	H	54	8.2
17985.7	45.7	-25.5	46.7	24.5	H	54	8.3
17997.8	45.6	-25.5	46.7	24.4	V	54	8.4
17982.4	45.5	-25.5	46.7	24.3	V	54	8.5
17995.6	45.5	-25.5	46.7	24.3	H	54	8.5
802.11a Channel:CH56							
17993.4	45.7	-25.5	46.7	24.5	V	54	8.3
17997.8	45.7	-25.5	46.7	24.5	H	54	8.3
17992.3	45.6	-25.5	46.7	24.4	H	54	8.4
17996.7	45.6	-25.5	46.7	24.4	H	54	8.4
17987.9	45.5	-25.5	46.7	24.3	H	54	8.5
17995.6	45.5	-25.5	46.7	24.3	V	54	8.5

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
				(dBuV/m)			
802.11a Channel:CH64							
17989	45.9	-25.5	46.7	24.7	V	54	8.1
17997.8	45.8	-25.5	46.7	24.6	H	54	8.2
17991.2	45.7	-25.5	46.7	24.5	V	54	8.3
17993.4	45.6	-25.5	46.7	24.4	H	54	8.4
17996.7	45.6	-25.5	46.7	24.4	V	54	8.4
5350	49.3	-16.9	34	32.2	H	54	4.7
802.11a Channel:CH100							
17994.5	46.1	-25.5	46.7	24.9	V	54	7.9
17987.9	45.9	-25.5	46.7	24.7	H	54	8.1
17990.1	45.9	-25.5	46.7	24.7	V	54	8.1
17991.2	45.8	-25.5	46.7	24.6	V	54	8.2
17995.6	45.8	-25.5	46.7	24.6	V	54	8.2
17993.400	45.7	-25.5	43.4	27.802	H	54	8.3
802.11a Channel:CH120							
17994.5	45.9	-25.5	46.7	24.7	H	54	8.1
17995.6	45.8	-25.5	46.7	24.6	H	54	8.2
17996.7	45.7	-25.5	46.7	24.5	H	54	8.3
17983.5	45.6	-25.5	46.7	24.4	V	54	8.4
17986.8	45.6	-25.5	46.7	24.4	V	54	8.4
17989	45.6	-25.5	46.7	24.4	V	54	8.4
802.11a Channel:CH140							
17991.2	45.7	-25.5	46.7	24.5	V	54	8.3
17992.3	45.7	-25.5	46.7	24.5	V	54	8.3
17993.4	45.7	-25.5	46.7	24.5	H	54	8.3
17983.5	45.6	-25.5	46.7	24.4	V	54	8.4
17984.6	45.6	-25.5	46.7	24.4	V	54	8.4
17995.600	45.6	-25.5	43.4	27.702	H	54	8.4

802.11n-HT20

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n Channel:CH36							
17989	45.8	-25.5	46.7	24.6	V	54	8.2
17993.4	45.8	-25.5	46.7	24.6	H	54	8.2
17994.5	45.7	-25.5	46.7	24.5	V	54	8.3
17996.7	45.7	-25.5	46.7	24.5	H	54	8.3
17992.3	45.6	-25.5	46.7	24.4	V	54	8.4
5149.8	47.5	-17	33.7	30.8	V	54	6.5
802.11n Channel:CH40							
17989	45.8	-25.5	46.7	24.6	H	54	8.2
17993.4	45.8	-25.5	46.7	24.6	V	54	8.2
17987.9	45.7	-25.5	46.7	24.5	V	54	8.3
17984.6	45.6	-25.5	46.7	24.4	H	54	8.4
17991.2	45.6	-25.5	46.7	24.4	H	54	8.4
17992.3	45.6	-25.5	46.7	24.4	H	54	8.4
802.11n Channel:CH48							
17996.7	45.8	-25.5	46.7	24.6	H	54	8.2
17997.8	45.7	-25.5	46.7	24.5	H	54	8.3
17995.6	45.6	-25.5	46.7	24.4	V	54	8.4
17980.2	45.5	-25.5	46.7	24.3	V	54	8.5
17987.9	45.5	-25.5	46.7	24.3	H	54	8.5
17989	45.5	-25.5	46.7	24.3	H	54	8.5
802.11n Channel:CH52							
17991.2	45.8	-25.5	46.7	24.6	H	54	8.2
17984.6	45.7	-25.5	46.7	24.5	V	54	8.3
17996.7	45.7	-25.5	46.7	24.5	V	54	8.3
17992.3	45.6	-25.5	46.7	24.4	H	54	8.4
17985.7	45.5	-25.5	46.7	24.3	H	54	8.5
17986.8	45.5	-25.5	46.7	24.3	H	54	8.5
802.11n Channel:CH56							
17993.4	45.8	-25.5	46.7	24.6	H	54	8.2
17991.2	45.6	-25.5	46.7	24.4	H	54	8.4
17992.3	45.6	-25.5	46.7	24.4	H	54	8.4
17996.7	45.6	-25.5	46.7	24.4	H	54	8.4
17986.8	45.5	-25.5	46.7	24.3	H	54	8.5
17989	45.5	-25.5	46.7	24.3	H	54	8.5

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n Channel:CH64							
17993.4	45.9	-25.5	46.7	24.7	H	54	8.1
17996.7	45.9	-25.5	46.7	24.7	H	54	8.1
17987.9	45.7	-25.5	46.7	24.5	V	54	8.3
17983.5	45.5	-25.5	46.7	24.3	H	54	8.5
17986.8	45.5	-25.5	46.7	24.3	V	54	8.5
5350.1	48.7	-16.9	34	31.6	H	54	5.3
802.11n Channel:CH100							
17997.8	46	-25.5	46.7	24.8	V	54	8
17987.9	45.9	-25.5	46.7	24.7	H	54	8.1
17982.4	45.6	-25.5	46.7	24.4	V	54	8.4
17984.6	45.6	-25.5	46.7	24.4	H	54	8.4
17993.4	45.6	-25.5	46.7	24.4	V	54	8.4
17991.200	45.5	-25.5	43.4	27.602	H	54	8.5
802.11n Channel:CH120							
17997.8	45.8	-25.5	46.7	24.6	H	54	8.2
17986.8	45.5	-25.5	46.7	24.3	V	54	8.5
17994.5	45.5	-25.5	46.7	24.3	H	54	8.5
17995.6	45.5	-25.5	46.7	24.3	H	54	8.5
17991.2	45.4	-25.5	46.7	24.2	V	54	8.6
17996.7	45.4	-25.5	46.7	24.2	H	54	8.6
802.11n Channel:CH140							
17991.2	45.8	-25.5	46.7	24.6	H	54	8.2
17997.8	45.8	-25.5	46.7	24.6	V	54	8.2
17987.9	45.7	-25.5	46.7	24.5	V	54	8.3
17995.6	45.7	-25.5	46.7	24.5	V	54	8.3
17990.1	45.6	-25.5	46.7	24.4	H	54	8.4
17990.100	45.6	-25.5	43.4	27.702	H	54	8.4

802.11n-HT40

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11n 40MHz Channel38							
17997.8	45.8	-25.5	46.7	24.6	H	54	8.2
17991.2	45.7	-25.5	46.7	24.5	H	54	8.3
17996.7	45.7	-25.5	46.7	24.5	V	54	8.3
17993.4	45.6	-25.5	46.7	24.4	V	54	8.4
17990.1	45.5	-25.5	46.7	24.3	V	54	8.5
5149.8	53.7	-17	33.7	37	H	54	0.3
802.11n 40MHz Channel46							
17996.7	46.1	-25.5	46.7	24.9	V	54	7.9
17991.2	45.7	-25.5	46.7	24.5	V	54	8.3
17995.6	45.7	-25.5	46.7	24.5	V	54	8.3
17985.7	45.6	-25.5	46.7	24.4	H	54	8.4
17989	45.6	-25.5	46.7	24.4	H	54	8.4
17993.4	45.6	-25.5	46.7	24.4	H	54	8.4
802.11n 40MHz Channel54							
17987.9	45.8	-25.5	46.7	24.6	H	54	8.2
17986.8	45.6	-25.5	46.7	24.4	V	54	8.4
17990.1	45.6	-25.5	46.7	24.4	H	54	8.4
17991.2	45.6	-25.5	46.7	24.4	V	54	8.4
17995.6	45.6	-25.5	46.7	24.4	V	54	8.4
17997.8	45.6	-25.5	46.7	24.4	H	54	8.4
802.11n 40MHz Channel62							
17997.8	45.8	-25.5	46.7	24.6	V	54	8.2
17990.1	45.7	-25.5	46.7	24.5	V	54	8.3
17995.6	45.6	-25.5	46.7	24.4	H	54	8.4
17982.4	45.5	-25.5	46.7	24.3	H	54	8.5
17984.6	45.5	-25.5	46.7	24.3	V	54	8.5
5350.1	47.5	-16.9	34	30.4	V	54	6.5
802.11n 40MHz Channel102							
17993.4	45.5	-25.5	46.7	24.3	V	54	8.5
17986.8	45.3	-25.5	46.7	24.1	H	54	8.7
17994.5	45.3	-25.5	46.7	24.1	V	54	8.7
17995.6	45.3	-25.5	46.7	24.1	V	54	8.7
17982.4	45.2	-25.5	46.7	24	H	54	8.8
17982.400	45.2	-25.5	43.4	27.302	H	54	8.8

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11n 40MHz Channel108							
17985.7	45.6	-25.5	46.7	24.4	H	54	8.4
17994.5	45.6	-25.5	46.7	24.4	V	54	8.4
17995.6	45.5	-25.5	46.7	24.3	H	54	8.5
17996.7	45.5	-25.5	46.7	24.3	V	54	8.5
17997.8	45.5	-25.5	46.7	24.3	V	54	8.5
17990.1	45.4	-25.5	46.7	24.2	V	54	8.6
802.11n 40MHz Channel134							
17997.8	45.5	-25.5	46.7	24.3	V	54	8.5
17986.8	45.4	-25.5	46.7	24.2	V	54	8.6
17984.6	45.3	-25.5	46.7	24.1	V	54	8.7
17996.7	45.3	-25.5	46.7	24.1	H	54	8.7
17982.4	45.2	-25.5	46.7	24	H	54	8.8
17990.100	45.2	-25.5	43.4	27.302	H	54	8.8

802.11ac-VHT20

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac Channel 36							
17992.3	45.7	-25.5	46.7	24.5	V	54	8.3
17993.4	45.7	-25.5	46.7	24.5	H	54	8.3
17996.7	45.7	-25.5	46.7	24.5	H	54	8.3
17987.9	45.6	-25.5	46.7	24.4	H	54	8.4
17994.5	45.6	-25.5	46.7	24.4	V	54	8.4
5149.7	48.6	-17	33.7	31.9	H	54	5.4
802.11ac Channel 40							
17997.8	45.9	-25.5	46.7	24.7	H	54	8.1
17995.6	45.8	-25.5	46.7	24.6	V	54	8.2
17987.9	45.6	-25.5	46.7	24.4	V	54	8.4
17992.3	45.6	-25.5	46.7	24.4	V	54	8.4
17996.7	45.6	-25.5	46.7	24.4	V	54	8.4
17989	45.5	-25.5	46.7	24.3	V	54	8.5
802.11ac Channel 48							
17986.8	45.8	-25.5	46.7	24.6	H	54	8.2
17993.4	45.7	-25.5	46.7	24.5	V	54	8.3
17989	45.6	-25.5	46.7	24.4	H	54	8.4

17990.1	45.6	-25.5	46.7	24.4	H	54	8.4
17991.2	45.6	-25.5	46.7	24.4	H	54	8.4
17994.5	45.6	-25.5	46.7	24.4	H	54	8.4
802.11ac Channel 52							
17996.7	45.8	-25.5	46.7	24.6	V	54	8.2
17997.8	45.8	-25.5	46.7	24.6	V	54	8.2
17991.2	45.6	-25.5	46.7	24.4	V	54	8.4
17987.9	45.5	-25.5	46.7	24.3	V	54	8.5
17993.4	45.5	-25.5	46.7	24.3	H	54	8.5
17984.6	45.4	-25.5	46.7	24.2	H	54	8.6
802.11ac Channel 56							
17987.9	45.7	-25.5	46.7	24.5	V	54	8.3
17990.1	45.7	-25.5	46.7	24.5	H	54	8.3
17996.7	45.6	-25.5	46.7	24.4	H	54	8.4
17979.1	45.5	-25.5	46.7	24.3	V	54	8.5
17989	45.5	-25.5	46.7	24.3	V	54	8.5
17992.3	45.5	-25.5	46.7	24.3	V	54	8.5

Frequency (MHz)	Result (dBUV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBUV/m)	Polarization	Limit (dBUV/m)	Margin (dBUV/m)
802.11ac Channel 64							
17996.7	45.8	-25.5	46.7	24.6	H	54	8.2
17982.4	45.7	-25.5	46.7	24.5	V	54	8.3
17990.1	45.7	-25.5	46.7	24.5	H	54	8.3
17997.8	45.7	-25.5	46.7	24.5	H	54	8.3
17986.8	45.6	-25.5	46.7	24.4	V	54	8.4
5350.2	45.4	-16.9	34	28.3	V	54	8.6
802.11ac Channel 100							
17981.3	45.6	-25.5	46.7	24.4	V	54	8.4
17985.7	45.6	-25.5	46.7	24.4	V	54	8.4
17993.4	45.6	-25.5	46.7	24.4	V	54	8.4
17994.5	45.6	-25.5	46.7	24.4	H	54	8.4
17990.1	45.4	-25.5	46.7	24.2	V	54	8.6
17991.200	45.4	-25.5	43.4	27.502	H	54	8.6
802.11ac Channel 120							
17995.6	46	-25.5	46.7	24.8	H	54	8
17991.2	45.6	-25.5	46.7	24.4	V	54	8.4
17997.8	45.6	-25.5	46.7	24.4	V	54	8.4
17989	45.5	-25.5	46.7	24.3	H	54	8.5

17992.3	45.5	-25.5	46.7	24.3V	54	8.5
17993.4	45.5	-25.5	46.7	24.3V	54	8.5
802.11ac Channel 140						
17989	45.6	-25.5	46.7	24.4H	54	8.4
17993.4	45.6	-25.5	46.7	24.4V	54	8.4
17996.7	45.6	-25.5	46.7	24.4H	54	8.4
17997.8	45.6	-25.5	46.7	24.4V	54	8.4
17986.8	45.5	-25.5	46.7	24.3V	54	8.5
18000.000	45.5	-26.5	46.4	25.605H	54	8.5

802.11ac-HT40

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 40M Channel:CH38							
17993.4	45.8	-25.5	46.7	24.6V		54	8.2
17997.8	45.7	-25.5	46.7	24.5H		54	8.3
17994.5	45.6	-25.5	46.7	24.4V		54	8.4
17989	45.5	-25.5	46.7	24.3H		54	8.5
17991.2	45.5	-25.5	46.7	24.3H		54	8.5
5150	53.6	-17	33.7	36.9H		54	0.4
802.11ac 40M Channel:CH46							
17997.8	45.9	-25.5	46.7	24.7V		54	8.1
17990.1	45.7	-25.5	46.7	24.5V		54	8.3
17987.9	45.6	-25.5	46.7	24.4H		54	8.4
17992.3	45.6	-25.5	46.7	24.4V		54	8.4
17995.6	45.6	-25.5	46.7	24.4H		54	8.4
17996.7	45.6	-25.5	46.7	24.4H		54	8.4
802.11ac 40M Channel:CH54							
17995.6	45.8	-25.5	46.7	24.6V		54	8.2
17994.5	45.7	-25.5	46.7	24.5H		54	8.3
17985.7	45.6	-25.5	46.7	24.4V		54	8.4
17989	45.6	-25.5	46.7	24.4H		54	8.4
17997.8	45.6	-25.5	46.7	24.4V		54	8.4
17987.9	45.5	-25.5	46.7	24.3V		54	8.5
802.11ac 40M Channel:CH62							
17994.5	45.9	-25.5	46.7	24.7V		54	8.1
17996.7	45.8	-25.5	46.7	24.6H		54	8.2
17997.8	45.8	-25.5	46.7	24.6H		54	8.2
17981.3	45.7	-25.5	46.7	24.5V		54	8.3

17992.3	45.7	-25.5	46.7	24.5V		54	8.3
5350.3	48.2	-16.9	34	31.1V		54	5.8
802.11ac 40M Channel:CH102							
17992.3	45.5	-25.5	46.7	24.3V		54	8.5
17994.5	45.5	-25.5	46.7	24.3V		54	8.5
17982.4	45.4	-25.5	46.7	24.2V		54	8.6
17993.4	45.4	-25.5	46.7	24.2V		54	8.6
17989	45.3	-25.5	46.7	24.1V		54	8.7
17997.800	45.2	-25.5	43.4	27.302H		54	8.8

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Magin (dBuV/m)
802.11ac 40M Channel:CH118							
17995.6	45.5	-25.5	46.7	24.3H		54	8.5
17989	45.4	-25.5	46.7	24.2H		54	8.6
17992.3	45.4	-25.5	46.7	24.2V		54	8.6
17997.8	45.4	-25.5	46.7	24.2H		54	8.6
17990.1	45.3	-25.5	46.7	24.1V		54	8.7
17994.5	45.3	-25.5	46.7	24.1V		54	8.7
802.11ac 40M Channel:CH134							
17994.5	45.5	-25.5	46.7	24.3H		54	8.5
17995.6	45.5	-25.5	46.7	24.3V		54	8.5
17996.7	45.5	-25.5	46.7	24.3H		54	8.5
17989	45.4	-25.5	46.7	24.2V		54	8.6
17997.8	45.4	-25.5	46.7	24.2V		54	8.6
17986.800	45.3	-25.5	43.4	27.402H		54	8.7

802.11ac-HT80

Frequency (MHz)	Result (dBuV/m)	Cable Loss (dB)	Antenna Factor	PMea (dBuV/m)	Polarization	Limit (dBuV/m)	Margin (dBuV/m)
802.11ac 80M Channel:CH42							
17994.5	45.7	-25.5	46.7	24.5	H	54	8.3
17997.8	45.5	-25.5	46.7	24.3	V	54	8.5
17993.4	45.4	-25.5	46.7	24.2	H	54	8.6
17987.9	45.3	-25.5	46.7	24.1	H	54	8.7
17991.2	45.3	-25.5	46.7	24.1	V	54	8.7
5144.8	53.4	-17	33.7	36.7	V	54	0.6
802.11ac 80M Channel:CH58							
17997.8	45.7	-25.5	46.7	24.5	H	54	8.3
17993.4	45.5	-25.5	46.7	24.3	V	54	8.5
17994.5	45.5	-25.5	46.7	24.3	H	54	8.5
17987.9	45.4	-25.5	46.7	24.2	H	54	8.6
17992.3	45.3	-25.5	46.7	24.1	V	54	8.7
5351.3	49.2	-16.9	34	32.1	H	54	4.8
802.11ac 80M Channel:CH106							
17987.9	45.4	-25.5	46.7	24.2	H	54	8.6
17994.5	45.4	-25.5	46.7	24.2	V	54	8.6
17990.1	45.3	-25.5	46.7	24.1	V	54	8.7
17997.8	45.3	-25.5	46.7	24.1	V	54	8.7
17978	45.2	-25.5	46.7	24	H	54	8.8
5459.4	50.6	-16.8	34.2	33.2	V	54	3.4

Sample calculation:

802.11ac CH106 - Average, 5459.4 MHz

Result (dBuV/m) = PMea(34.2) + Cable Loss(-16.8) + Antenna Factor(34.2)= 50.6dBuV/m

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

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode		
0.15 to 0.5	66 to 56	Fig.69		P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode		
0.15 to 0.5	56 to 46	Fig.69		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:

Result for Traffic:

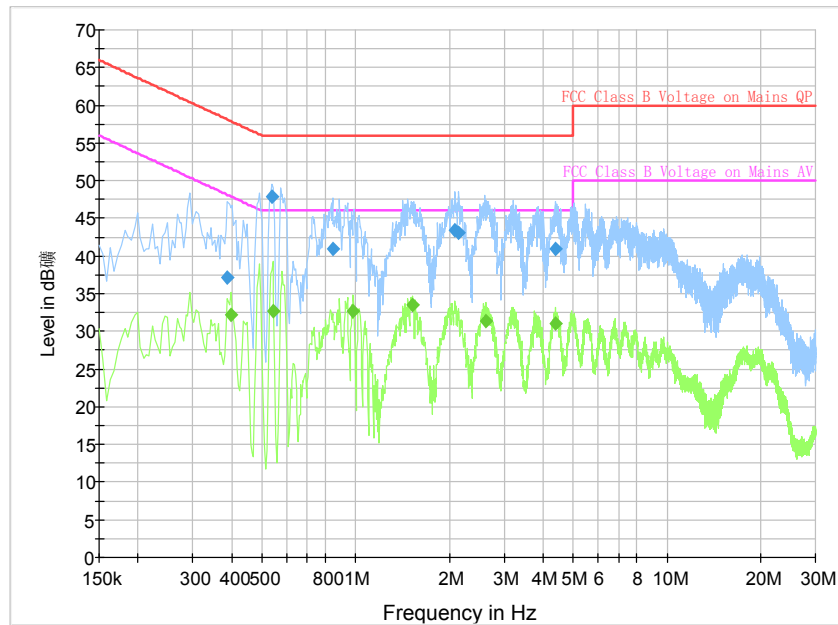


Fig.69 Conducted Emission (802.11a, Ch40, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.388500	37.1	N	19.9	21.0	58.1
0.537000	47.9	L1	20.1	8.1	56.0
0.843000	40.9	L1	20.0	15.1	56.0
2.089500	43.5	L1	20.1	12.5	56.0
2.148000	43.1	L1	20.1	12.9	56.0
4.380000	41.0	L1	20.7	15.0	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.397500	32.2	L1	20.1	15.7	47.9
0.541500	32.7	L1	20.1	13.3	46.0
0.982500	32.7	L1	19.8	13.3	46.0
1.522500	33.6	L1	19.9	12.4	46.0
2.620500	31.4	L1	20.2	14.6	46.0
4.398000	31.0	N	20.4	15.0	46.0

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% of the 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
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Measurement Result:

Mode	Frequency	99% Occupied bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.70	17.11	P
	5200 MHz	Fig.71	17.09	P
	5240 MHz	Fig.72	18.37	P
802.11n HT20	5180 MHz	Fig.73	18.39	P
	5200 MHz	Fig.74	18.32	P
	5240 MHz	Fig.75	18.38	P
802.11ac HT20	5180 MHz	Fig.76	18.40	P
	5200 MHz	Fig.77	18.38	P
	5240 MHz	Fig.78	18.40	P
802.11n HT40	5190 MHz	Fig.79	36.38	P
	5230 MHz	Fig.80	36.36	P
802.11ac	5190 MHz	Fig.81	36.36	P

HT40	5230 MHz	Fig.82	36.37	P
802.11ac HT80	5210 MHz	Fig.83	75.83	P

Conclusion: PASS
Test graphs as below:

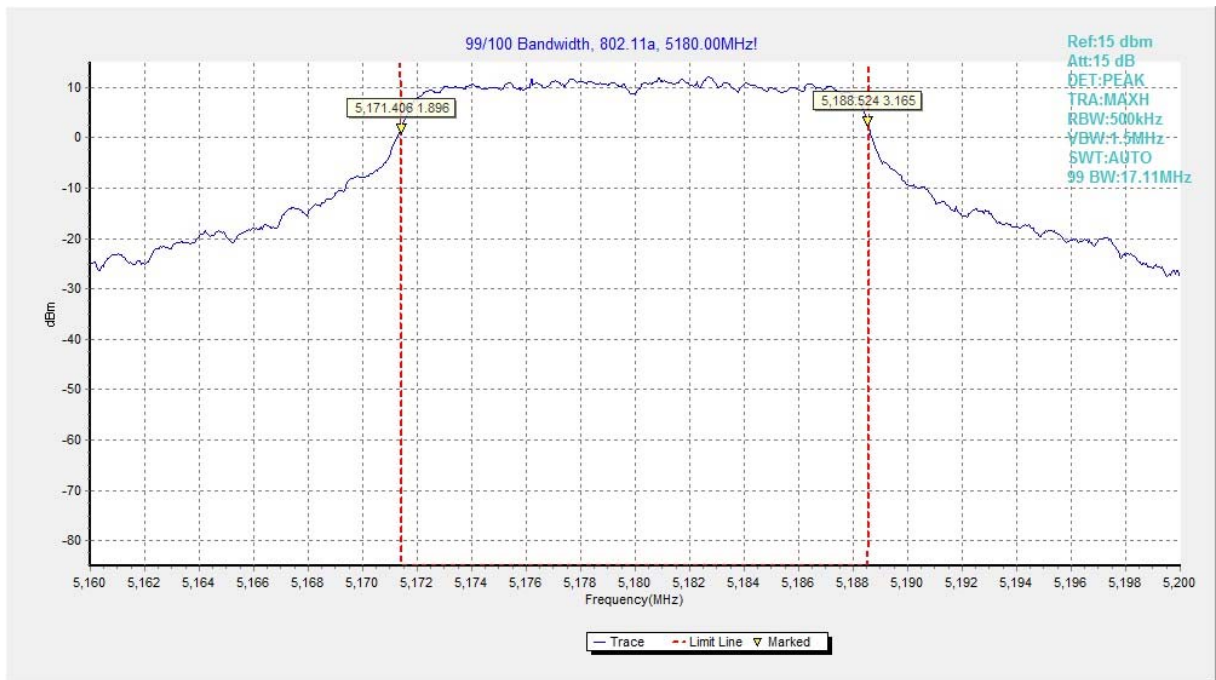


Fig.70 99% Occupied bandwidth (802.11a, 5180MHz)

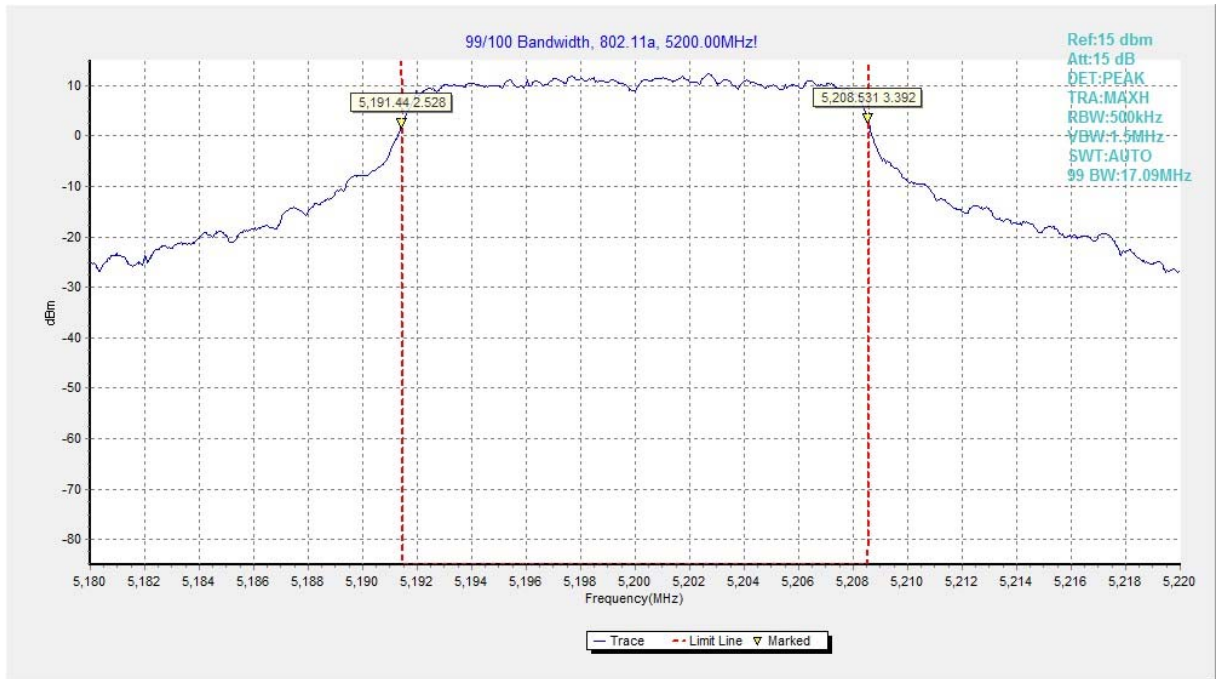


Fig.71 99% Occupied bandwidth (802.11a, 5200MHz)

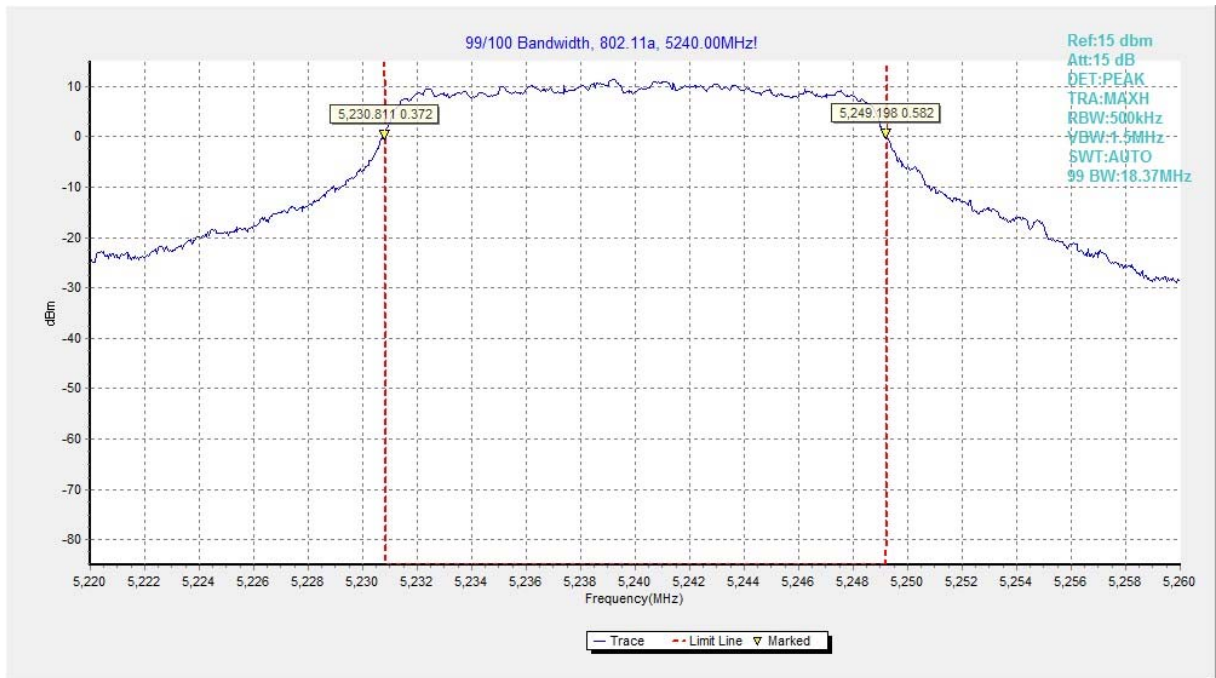


Fig.72 99% Occupied bandwidth (802.11a, 5240MHz)

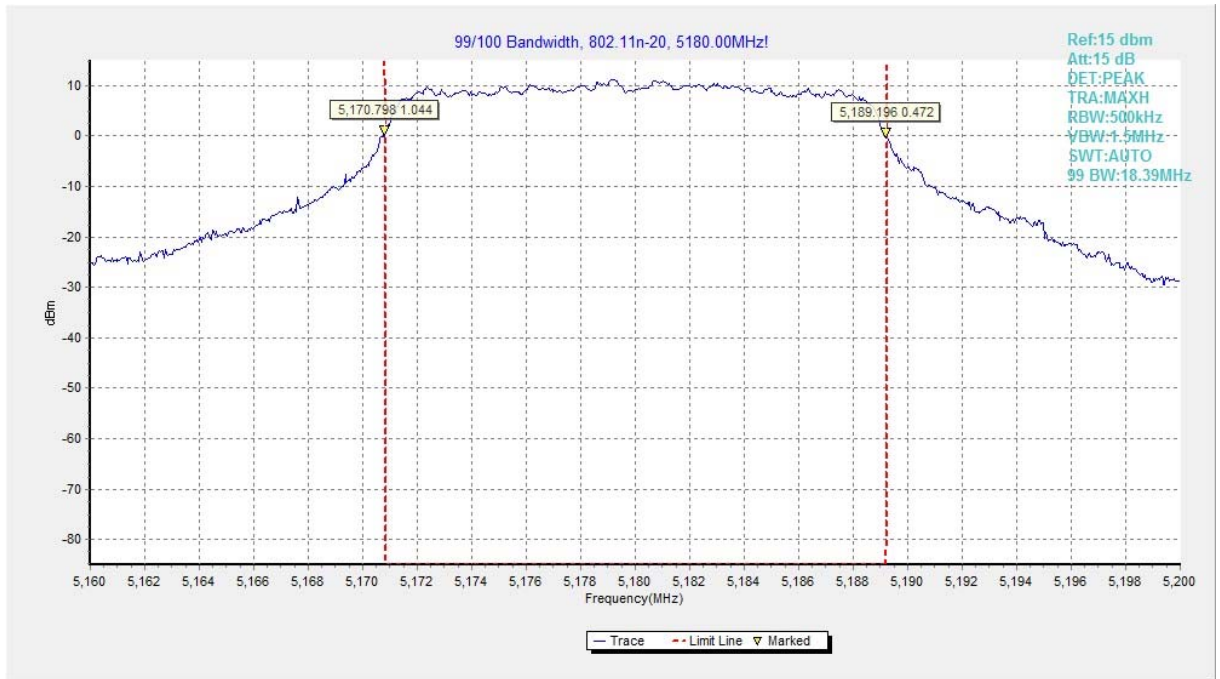


Fig.73 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

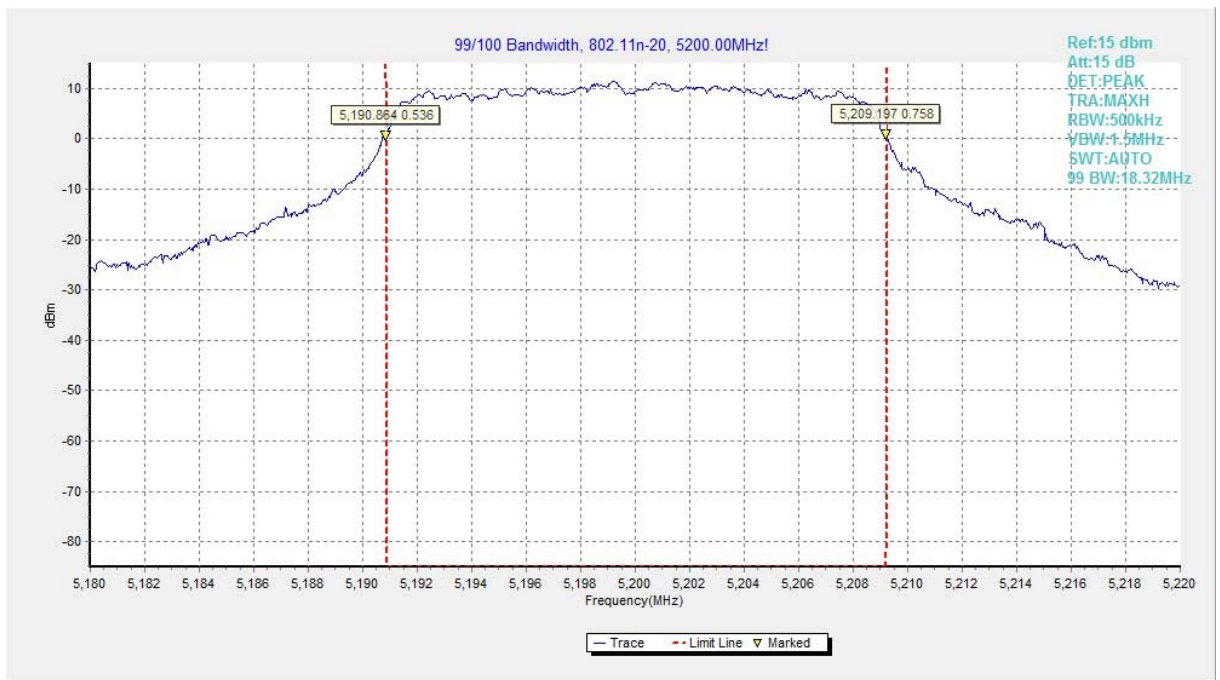


Fig.74 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

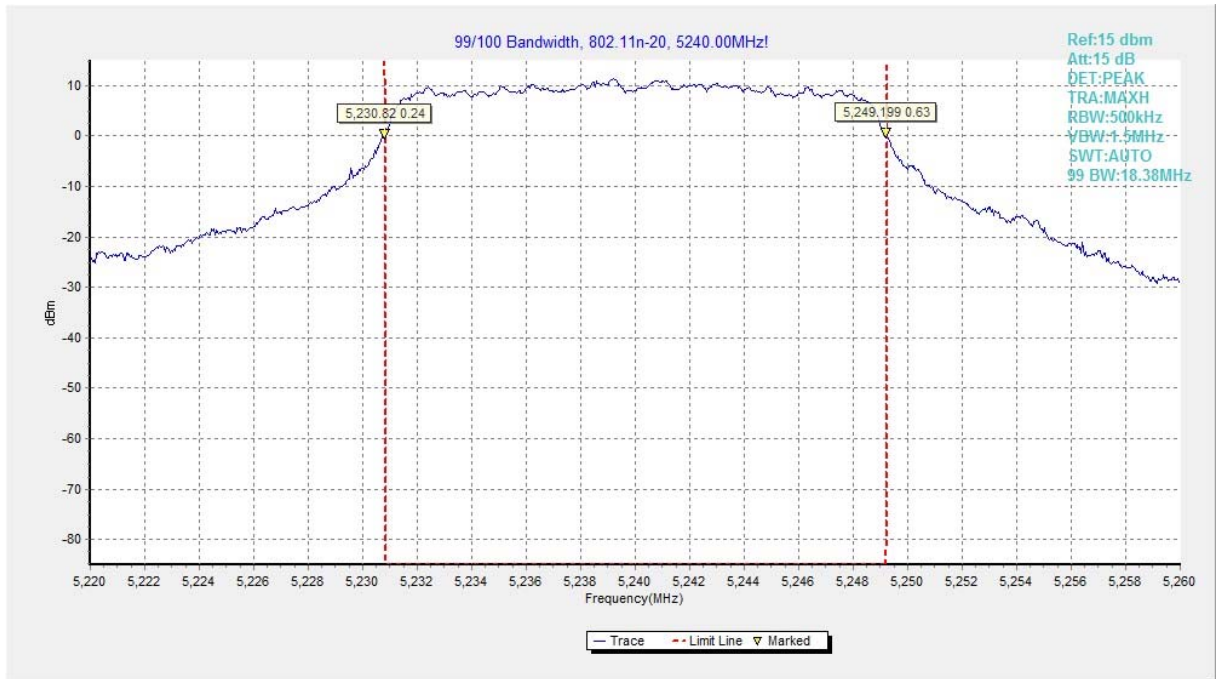


Fig.75 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

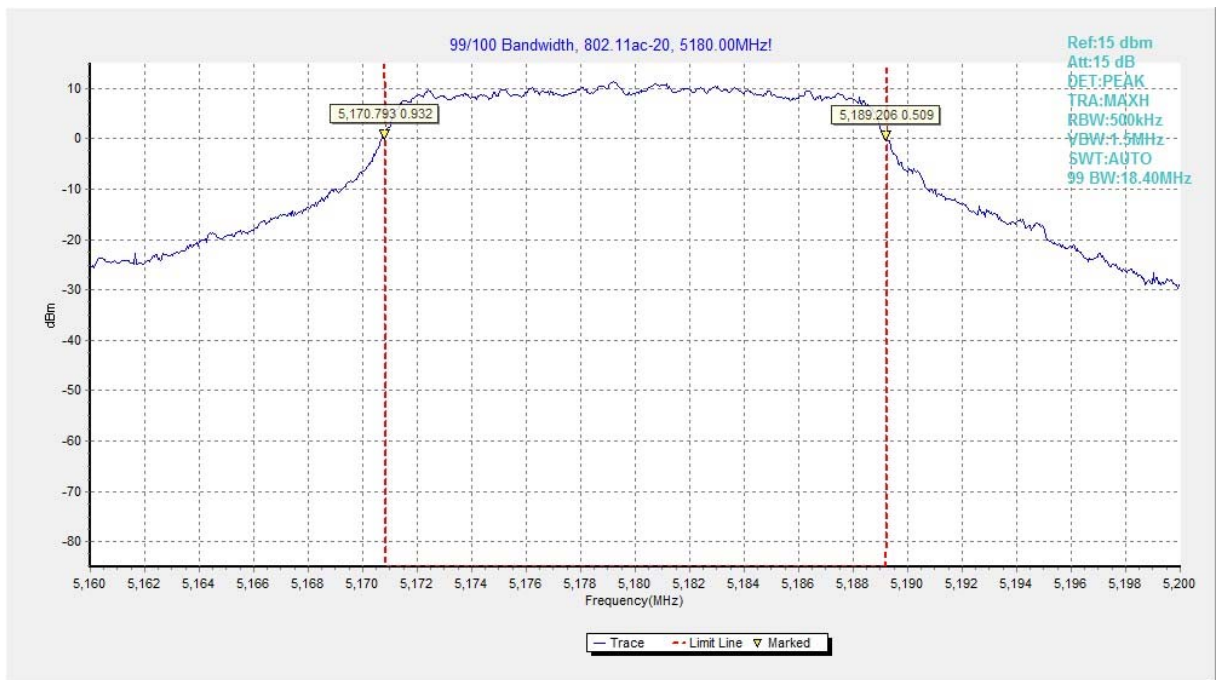


Fig.76 99% Occupied bandwidth (802.11ac-HT20, 5180MHz)