



**FCC PART 15
TEST REPORT
No.I20Z60764-IOT03**

for

Client name:TCL Communication Ltd.

Product name:5G NR/ LTE/WCDMA/GSM Mobile Phone

Model name:T790W,T790Z

With

FCC ID:2ACCJN039

Hardware Version: 05

Software Version: 6BSEE000

Issued Date: 2020-07-03

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

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

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

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



REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60764-IOT03	Rev.0	1st edition	2020-07-03

CONTENTS

CONTENTS.....	3
1. TEST LATORATORY.....	5
1.1. INTRODUCTION & ACCREDITATION.....	5
1.2. TESTING LOCATION.....	5
1.3. TESTING ENVIRONMENT.....	5
1.4. PROJECT DATE.....	5
1.5. SIGNATURE.....	5
2. CLIENT INFORMATION.....	6
2.1. APPLICANT INFORMATION.....	6
2.2. MANUFACTURER INFORMATION.....	6
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARYEQUIPMENT(AE).....	7
3.1. ABOUT EUT.....	7
3.2. INTERNAL IDENTIFICATION OF EUT.....	7
3.3. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST.....	7
3.4. GENERAL DESCRIPTION.....	7
3.5. INTERPRETATION OF THE TEST ENVIRONMENT.....	7
4. REFERENCE DOCUMENTS.....	8
4.1. DOCUMENTS SUPPLIED BY APPLICANT.....	8
4.2. REFERENCE DOCUMENTS FOR TESTING.....	8
5. LABORATORY ENVIRONMENT.....	8
6. SUMMARY OF TEST RESULTS.....	9
6.1. SUMMARY OF TEST RESULTS.....	9
6.2. STATEMENTS.....	9
6.3. TEST CONDITIONS.....	9
7. TEST EQUIPMENTS UTILIZED.....	10
8. MEASUREMENT UNCERTAINTY.....	11
8.1. TRANSMITTER OUTPUT POWER.....	11
8.2. PEAK POWER SPECTRAL DENSITY.....	11
8.3. OCCUPIED CHANNEL BANDWIDTH.....	11
8.4. BAND EDGES COMPLIANCE.....	11
8.5. SPURIOUS EMISSIONS.....	11
8.6. AC POWERLINE CONDUCTED EMISSION.....	11
ANNEX A: MEASUREMENT RESULTS.....	12
A.1. MEASUREMENT METHOD.....	12
A.2. MAXIMUM OUTPUT POWER.....	12



A.3. PEAK POWER SPECTRAL DENSITY (CONDUCTED).....	15
A.4. OCCUPIED 26dB BANDWIDTH(CONDUCTED).....	17
A.5. BAND EDGES COMPLIANCE.....	45
A5.1 BAND EDGES - RADIATED.....	45
A.6. TRANSMITTER SPURIOUS EMISSION.....	58
A.7. AC POWERLINE CONDUCTED EMISSION (150kHz- 30MHz).....	81
A.8. 99% OCCUPIED BANDWIDTH.....	83
A.9. POWER CONTROL.....	90
ANNEX B: ACCREDITATION CERTIFICATE.....	91

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

Radiated 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°C

Relative Humidity: 20-75%

1.4. Project date

Testing Start Date: 2020-05-14


Testing End Date: 2020-07-02

1.5. Signature



Jiang Xue

(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.
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

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	5G NR/ LTE/WCDMA/GSM Mobile Phone		
Model name	T790W, T790Z		
FCC ID	2ACCJN039		
WLAN Frequency Range	ISM Bands: -5150MHz~5250MHz -5250MHz~5350MHz -5470MHz~5725MHz		
Type of modulation	OFDM		
Antenna	Integral Antenna		
Voltage	3.85V		
Antenna Gain	-2.1dBi(ant5), -1.9dBi(ant6)		
Antenna	Integral Antenna		
Antenna Function Description	802.11a/n/ac MIMO	Ant5	Ant6

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	015710000201175	05	6BSEE000
EUT2	015710000200649	05	6BSEE000

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

3.3. Internal Identification of EUT 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 5G NR/ LTE/WCDMA/GSM Mobile Phone with integrated antenna and inbuilt battery.

It has Bluetooth (EDR) function.

It consists of normal options: travel charger, USB cable.

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

Samples undergoing test were selected by the client.

3.5. Interpretation of the Test Environment

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

Measurement Uncertainty

Parameter	Uncertainty
temperature	0.48°C

humidity	2 %
DC voltages	0.003V

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

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

4.2. Reference Documents for testing

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

FCC Part15	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	2018
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12
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

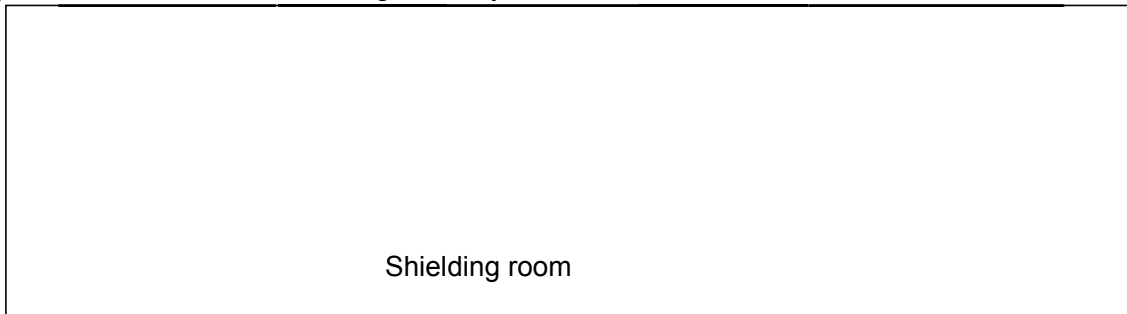
Measurement Uncertainty: 3.38dB, k=2.

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

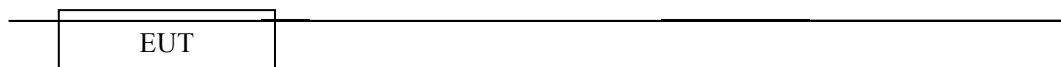


A.1.2. Radiated Emission Measurements

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

Note:

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

$$802.11a=11+10*\log(B)=23.17, B=22.50/2+5=16.50\text{MHz},$$

$$802.11n-HT20=11+10*\log(B)=23.31, B=24.05/2+5=17.03\text{MHz},$$

$$802.11ac-VHT20=11+10*\log(B)=23.30, B=24.00/2+5=17.00\text{MHz},$$

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

$$802.11n-HT40: B=41.28/2+15=35.64\text{MHz},$$

$$802.11ac-VHT40: B=41.28/2+15=35.64\text{MHz},$$

$$802.11ac-VHT80: B=82.88/2+35=76.44\text{MHz},$$

Measurement Results:

Duty Cycle:

11a	6Mbps
Duty Cycle	99%
11n-20	MCS0
Duty Cycle	99%
11n-40	MCS0
Duty Cycle	99%
11ac-20	MCS0
Duty Cycle	99%
11ac-40	MCS0
Duty Cycle	99%
11ac-80	MCS0
Duty Cycle	99%

The data rate 6Mbps(11a),MCS0(11n-20),MCS0(11ac-20),MCS0(11n-40),MCS0(11ac-40) and MCS0(11ac-80) are selected as worse condition declared by client, and the following cases are performed with this condition.

Ant5+Ant6:

5GHz Band									
Mode	Date Rate	Chnanel	Freq.(MHz)	Maximum output Power (dBm)			Maximum output Power Limit(dBm)		Pass/Fail
				Ant5	Ant6	SUM	Ant5	Ant6	

11a	6Mbps	36	5180 MHz	16.06	16.50	19.30	24.00	Pass
11a	6Mbps	40	5200 MHz	15.66	16.60	19.17	24.00	Pass
11a	6Mbps	48	5240 MHz	14.94	16.67	18.90	24.00	Pass
11a	6Mbps	52	5260 MHz	14.90	16.62	18.56	24.00	Pass
11a	6Mbps	56	5280 MHz	15.09	15.97	18.56	24.00	Pass
11a	6Mbps	64	5320 MHz	16.05	15.36	18.73	24.00	Pass
11a	6Mbps	100	5500 MHz	15.69	16.16	18.94	24.00	Pass
11a	6Mbps	116	5580 MHz	16.22	17.57	19.96	24.00	Pass
11a	6Mbps	140	5700 MHz	16.26	16.83	19.56	24.00	Pass
11a	6Mbps	144	5720 MHz	16.45	17.25	19.88	23.25	Pass
11n-20	MCS0	36	5180 MHz	16.33	16.28	19.32	24.00	Pass
11n-20	MCS0	40	5200 MHz	16.05	16.33	19.20	24.00	Pass
11n-20	MCS0	48	5240 MHz	15.47	16.01	18.76	24.00	Pass
11n-20	MCS0	52	5260 MHz	15.85	16.37	19.13	24.00	Pass
11n-20	MCS0	56	5280 MHz	15.80	15.97	18.90	24.00	Pass
11n-20	MCS0	64	5320 MHz	15.84	15.37	18.62	24.00	Pass
11n-20	MCS0	100	5500 MHz	15.46	16.89	19.24	24.00	Pass
11n-20	MCS0	116	5580 MHz	15.53	15.59	18.57	24.00	Pass
11n-20	MCS0	140	5700 MHz	13.33	15.87	17.79	24.00	Pass
11n-20	MCS0	144	5720 MHz	13.49	16.06	17.97	23.40	Pass
11ac-20	MCS0	36	5180 MHz	15.82	15.84	18.84	24.00	Pass
11ac-20	MCS0	40	5200 MHz	15.53	15.80	18.68	24.00	Pass
11ac-20	MCS0	48	5240 MHz	14.81	15.61	18.24	24.00	Pass
11ac-20	MCS0	52	5260 MHz	15.38	15.89	18.65	24.00	Pass
11ac-20	MCS0	56	5280 MHz	15.34	15.57	18.47	24.00	Pass
11ac-20	MCS0	64	5320 MHz	15.27	14.88	18.09	24.00	Pass
11ac-20	MCS0	100	5500 MHz	14.95	16.30	18.69	24.00	Pass
11ac-20	MCS0	116	5580 MHz	14.91	15.13	18.03	24.00	Pass
11ac-20	MCS0	140	5700 MHz	12.76	15.32	17.23	24.00	Pass
11ac-20	MCS0	144	5720 MHz	12.61	15.62	17.38	23.31	Pass
11n-40	MCS0	38	5190 MHz	16.50	16.71	19.62	24.00	Pass
11n-40	MCS0	46	5230 MHz	15.85	16.39	19.14	24.00	Pass
11n-40	MCS0	54	5270 MHz	16.08	16.61	19.36	24.00	Pass
11n-40	MCS0	62	5310 MHz	15.98	15.76	18.88	24.00	Pass
11n-40	MCS0	102	5510 MHz	15.47	17.08	19.36	24.00	Pass
11n-40	MCS0	110	5550 MHz	15.06	16.19	18.67	24.00	Pass
11n-40	MCS0	134	5670 MHz	13.95	16.76	18.59	24.00	Pass
11n-40	MCS0	142	5710 MHz	13.45	16.32	18.13	24.00	Pass
11ac-40	MCS0	38	5190 MHz	16.01	16.26	19.15	24.00	Pass
11ac-40	MCS0	46	5230 MHz	15.32	15.90	18.63	24.00	Pass
11ac-40	MCS0	54	5270 MHz	15.58	16.17	18.90	24.00	Pass

11ac-40	MCS0	62	5310 MHz	15.43	15.14	18.30	24.00	Pass
11ac-40	MCS0	102	5510 MHz	14.98	16.68	18.92	24.00	Pass
11ac-40	MCS0	110	5550 MHz	14.64	15.60	18.16	24.00	Pass
11ac-40	MCS0	134	5670 MHz	13.45	16.23	18.07	24.00	Pass
11ac-40	MCS0	142	5710 MHz	12.99	15.91	17.71	24.00	Pass
11ac-80	MCS0	42	5210MHz	14.17	14.82	17.52	24.00	Pass
11ac-80	MCS0	58	5290MHz	14.05	14.61	17.35	24.00	Pass
11ac-80	MCS0	106	5530MHz	13.40	14.46	16.97	24.00	Pass
11ac-80	MCS0	122	5610MHz	14.22	14.82	17.54	24.00	Pass
11ac-80	MCS0	138	5690 MHz	11.55	14.38	16.20	24.00	Pass

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:

Ant4+Ant5:

5GHz Band									
Mode	Data Rate	Channel	Freq.(MHz)	Peak Power Spectral Density (dBm/MHz)			Peak Power Spectral Density Limit(dBm/MHz)		Pass/Fail
				Ant5	Ant6	SUM	Ant5	Ant6	
11a	18Mbps	36	5180 MHz	4.49	6.28	8.49	11.00		Pass
11a	18Mbps	40	5200 MHz	4.71	6.19	8.52	11.00		Pass
11a	18Mbps	48	5240 MHz	4.10	5.43	7.83	11.00		Pass
11a	18Mbps	52	5260 MHz	4.37	5.59	8.03	11.00		Pass
11a	18Mbps	56	5280 MHz	4.50	5.37	7.97	11.00		Pass
11a	18Mbps	64	5320 MHz	4.53	5.5	8.05	11.00		Pass
11a	18Mbps	100	5500 MHz	4.22	6.31	8.40	11.00		Pass
11a	18Mbps	116	5580 MHz	5.33	6.33	8.87	11.00		Pass
11a	18Mbps	140	5700 MHz	2.96	6.09	7.81	11.00		Pass
11a	18Mbps	144	5720 MHz	4.25	6.14	8.31	11.00		Pass
11n-20	MCS2	36	5180 MHz	3.83	5.57	7.80	11.00		Pass
11n-20	MCS2	40	5200 MHz	3.78	5.39	7.67	11.00		Pass

11n-20	MCS2	48	5240 MHz	3.25	4.74	7.07	11.00	Pass
11n-20	MCS2	52	5260 MHz	3.59	4.77	7.23	11.00	Pass
11n-20	MCS2	56	5280 MHz	3.76	4.55	7.18	11.00	Pass
11n-20	MCS2	64	5320 MHz	3.60	4.87	7.29	11.00	Pass
11n-20	MCS2	100	5500 MHz	3.20	5.90	7.77	11.00	Pass
11n-20	MCS2	116	5580 MHz	4.13	5.64	7.96	11.00	Pass
11n-20	MCS2	140	5700 MHz	1.09	5.29	6.69	11.00	Pass
11n-20	MCS2	144	5720 MHz	2.84	5.39	7.31	11.00	Pass
11ac-20	MCS2	36	5180 MHz	3.82	5.06	7.49	11.00	Pass
11ac-20	MCS2	40	5200 MHz	3.63	5.00	7.38	11.00	Pass
11ac-20	MCS2	48	5240 MHz	3.02	4.14	6.63	11.00	Pass
11ac-20	MCS2	52	5260 MHz	3.48	4.04	6.78	11.00	Pass
11ac-20	MCS2	56	5280 MHz	3.60	4.10	6.87	11.00	Pass
11ac-20	MCS2	64	5320 MHz	3.44	4.45	6.98	11.00	Pass
11ac-20	MCS2	100	5500 MHz	3.10	5.46	7.45	11.00	Pass
11ac-20	MCS2	116	5580 MHz	3.63	5.20	7.50	11.00	Pass
11ac-20	MCS2	140	5700 MHz	0.69	4.87	6.27	11.00	Pass
11ac-20	MCS2	144	5720 MHz	2.37	4.80	6.76	11.00	Pass
11n-40	MCS1	38	5190 MHz	1.14	3.26	5.34	11.00	Pass
11n-40	MCS1	46	5230 MHz	0.83	2.27	4.62	11.00	Pass
11n-40	MCS1	54	5270 MHz	1.12	2.22	4.72	11.00	Pass
11n-40	MCS1	62	5310 MHz	0.93	2.16	4.60	11.00	Pass
11n-40	MCS1	102	5510 MHz	0.92	3.21	5.22	11.00	Pass
11n-40	MCS1	110	5550 MHz	1.01	2.86	5.04	11.00	Pass
11n-40	MCS1	134	5670 MHz	-0.02	2.59	4.49	11.00	Pass
11n-40	MCS1	142	5710 MHz	0.46	2.53	4.63	11.00	Pass
11ac-40	MCS1	38	5190 MHz	1.06	2.70	4.97	11.00	Pass
11ac-40	MCS1	46	5230 MHz	0.66	1.61	4.17	11.00	Pass
11ac-40	MCS1	54	5270 MHz	0.83	1.87	4.39	11.00	Pass
11ac-40	MCS1	62	5310 MHz	0.82	1.78	4.34	11.00	Pass
11ac-40	MCS1	102	5510 MHz	0.64	2.67	4.78	11.00	Pass
11ac-40	MCS1	110	5550 MHz	0.65	2.57	4.73	11.00	Pass
11ac-40	MCS1	134	5670 MHz	-1.13	1.83	3.61	11.00	Pass
11ac-40	MCS1	142	5710 MHz	-0.01	2.20	4.24	11.00	Pass
11ac-80	MCS1	42	5210MHz	-3.58	-1.93	0.33	11.00	Pass
11ac-80	MCS1	58	5290MHz	-3.83	-3.08	-0.43	11.00	Pass
11ac-80	MCS1	106	5530MHz	-4.06	-1.92	0.15	11.00	Pass
11ac-80	MCS1	122	5610MHz	-3.01	-1.52	0.81	11.00	Pass
11ac-80	MCS1	138	5690 MHz	-3.63	-2.39	0.04	11.00	Pass

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
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Measurement Result:

Mode	Channel	Occupied 26dB Bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	5180 MHz	Fig.1	24.10	P
	5200 MHz	Fig.2	24.00	P
	5240 MHz	Fig.3	23.80	P
	5260 MHz	Fig.4	23.70	P
	5280 MHz	Fig.5	23.55	P
	5320 MHz	Fig.6	23.80	P
	5500 MHz	Fig.7	23.40	P
	5580 MHz	Fig.8	23.30	P
	5700 MHz	Fig.9	23.60	P
	5720 MHz	Fig.10	22.50	P
802.11n HT20	5180 MHz	Fig.11	25.35	P
	5200 MHz	Fig.12	23.95	P
	5240 MHz	Fig.13	24.05	P
	5260 MHz	Fig.14	24.40	P
	5280 MHz	Fig.15	24.05	P

	5320 MHz	Fig.16	24.30	P
	5500 MHz	Fig.17	24.65	P
	5580 MHz	Fig.18	24.35	P
	5700 MHz	Fig.19	26.15	P
	5720 MHz	Fig.20	24.05	P
802.11ac HT20	5180 MHz	Fig.21	24.80	P
	5200 MHz	Fig.22	24.10	P
	5240 MHz	Fig.23	24.00	P
	5260 MHz	Fig.24	24.05	P
	5280 MHz	Fig.25	24.15	P
	5320 MHz	Fig.26	24.15	P
	5500 MHz	Fig.27	24.80	P
	5580 MHz	Fig.28	24.15	P
	5700 MHz	Fig.29	25.25	P
5720 MHz	Fig.30	24.00	P	
802.11n HT40	5190 MHz	Fig.31	42.08	P
	5230 MHz	Fig.32	41.76	P
	5270 MHz	Fig.33	41.76	P
	5310 MHz	Fig.34	42.16	P
	5510 MHz	Fig.35	41.68	P
	5550 MHz	Fig.36	41.60	P
	5670 MHz	Fig.37	41.84	P
	5710 MHz	Fig.38	41.28	P
802.11ac HT40	5190 MHz	Fig.39	42.08	P
	5230 MHz	Fig.40	41.92	P
	5270 MHz	Fig.41	41.60	P
	5310 MHz	Fig.42	41.76	P
	5510 MHz	Fig.43	41.52	P
	5550 MHz	Fig.44	41.76	P
	5670 MHz	Fig.45	41.76	P
	5710 MHz	Fig.46	41.28	P
802.11ac HT80	5210MHz	Fig.47	83.52	P
	5290MHz	Fig.48	83.84	P
	5530MHz	Fig.49	83.36	P
	5610MHz	Fig.50	83.52	P
	5690 MHz	Fig.51	82.88	P

Conclusion: PASS

Test graphs as below:

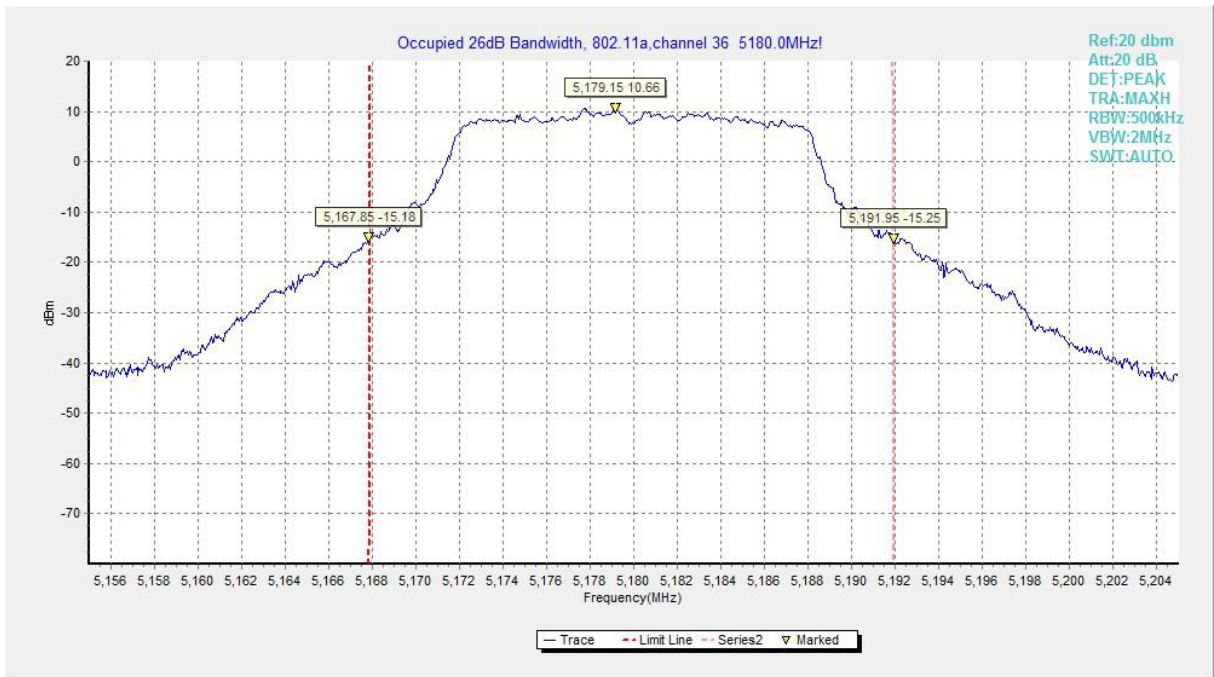


Fig.1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

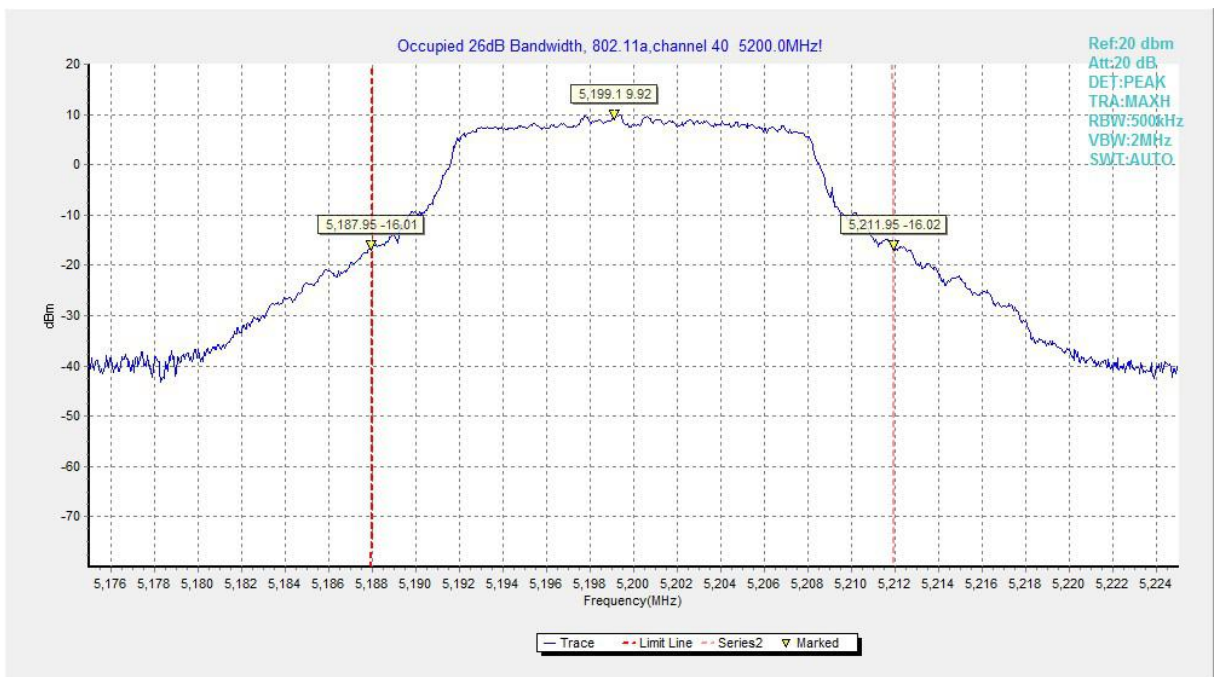


Fig.2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

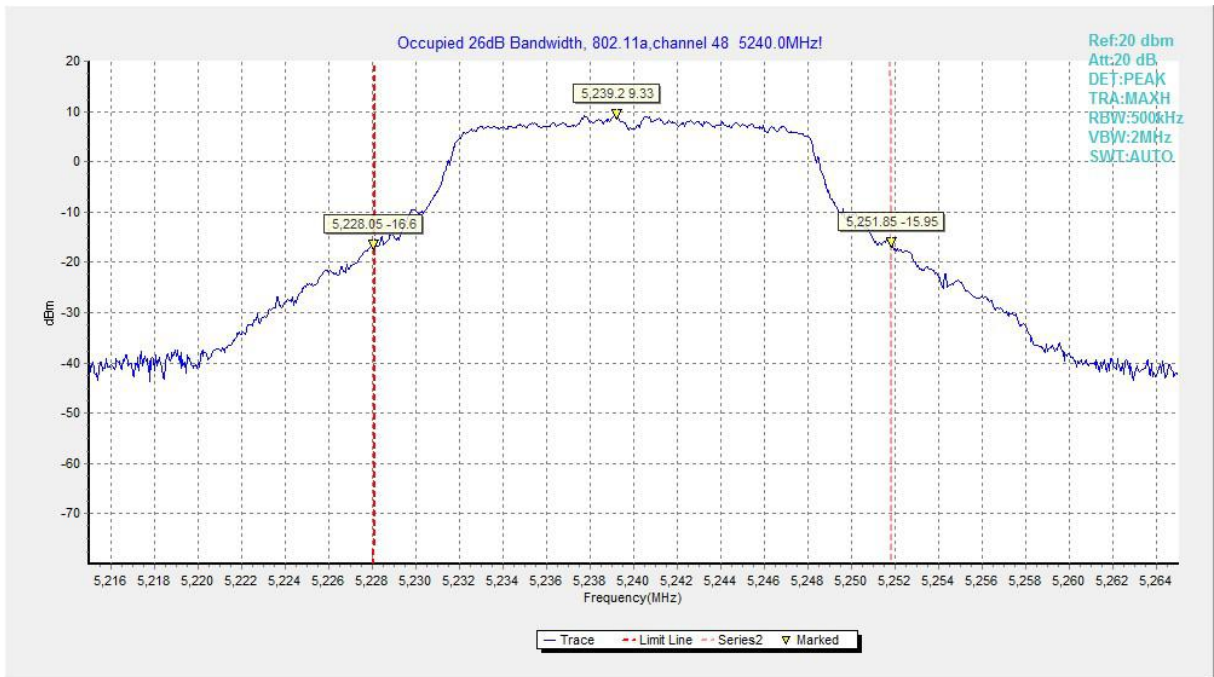


Fig.3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

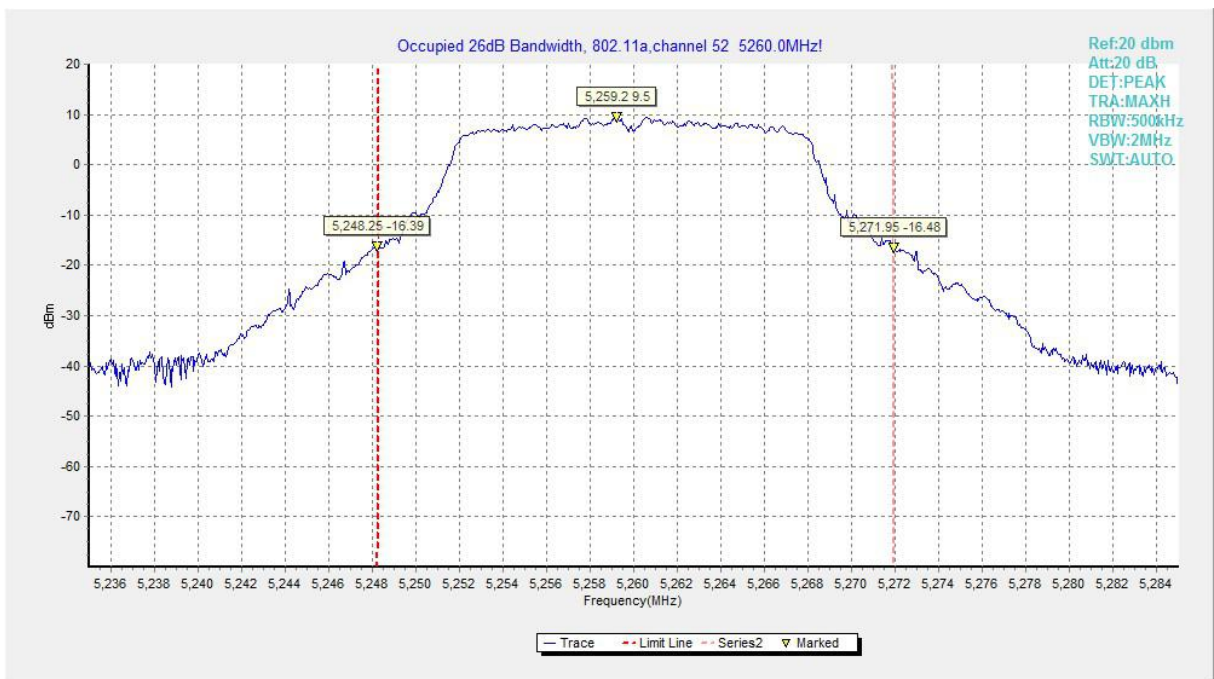


Fig.4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

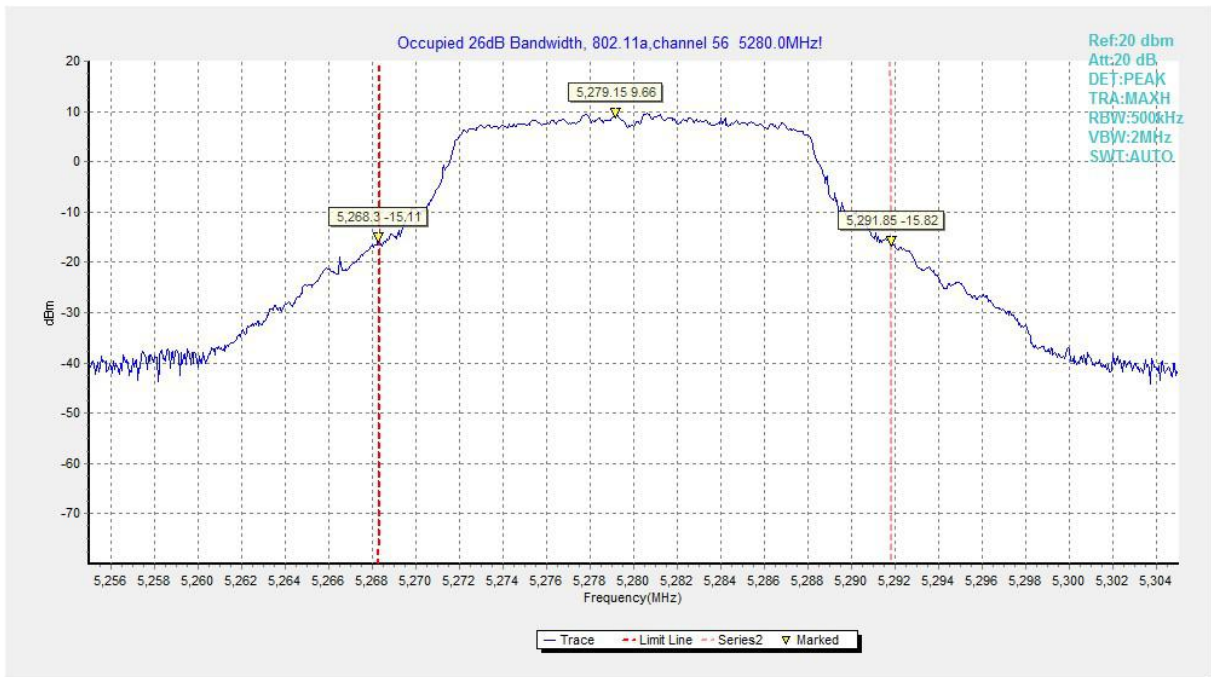


Fig.5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

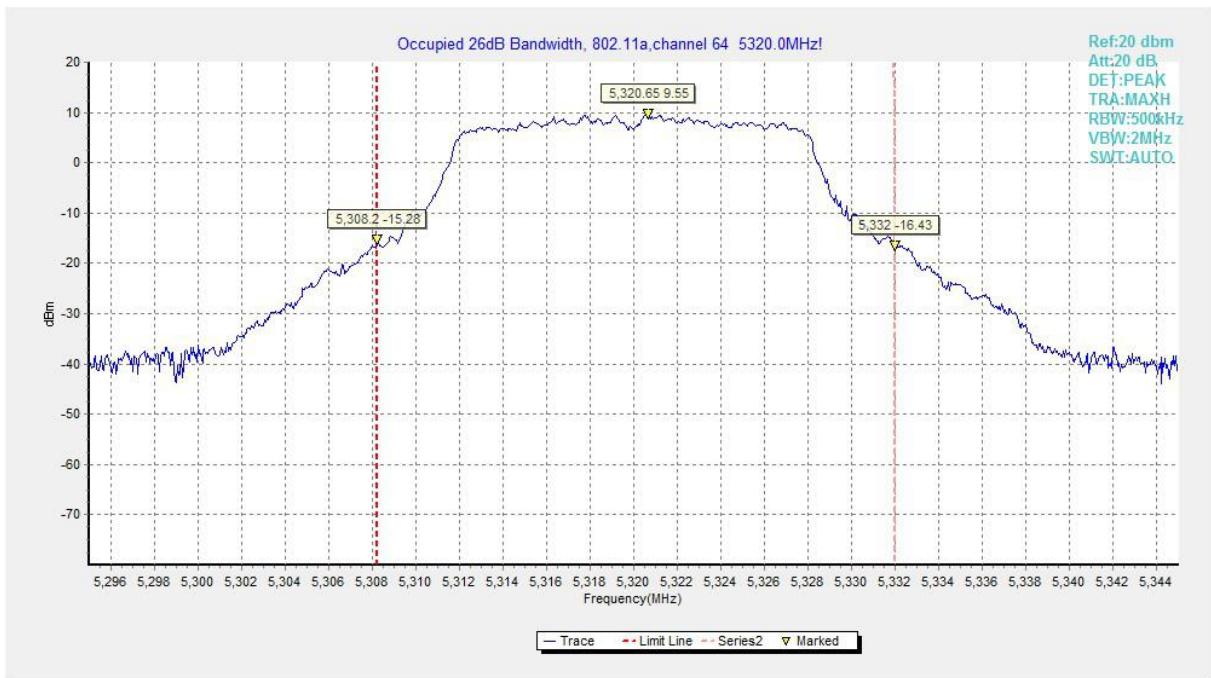


Fig.6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

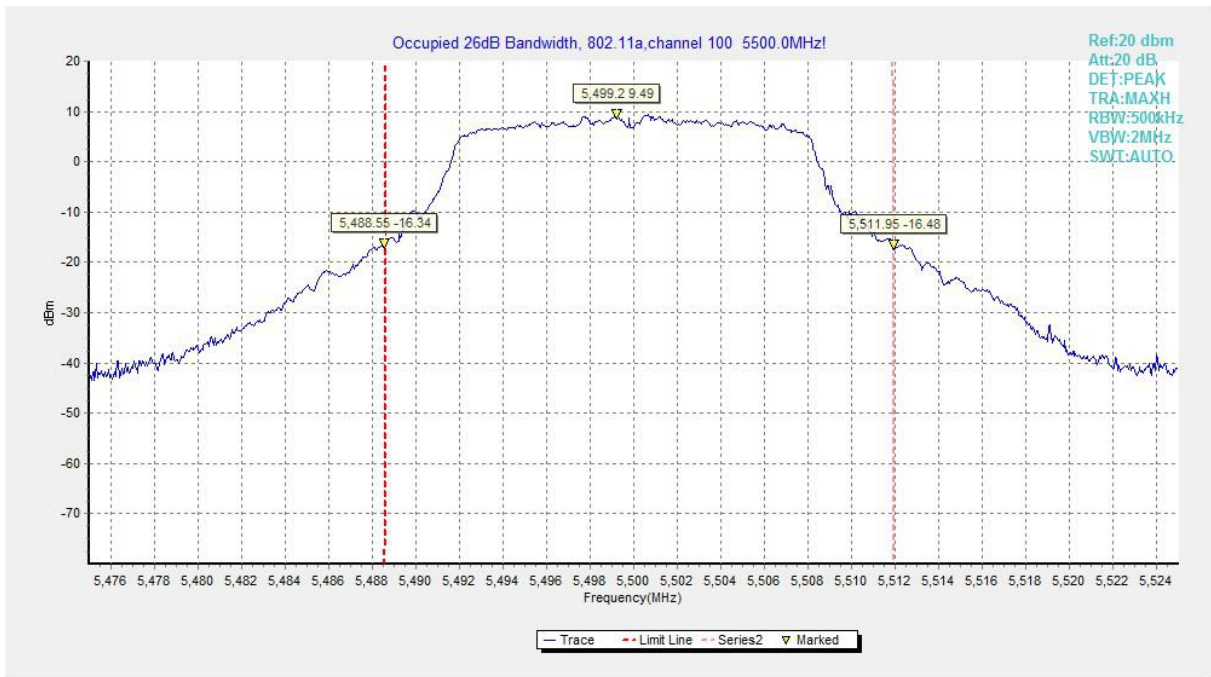


Fig.7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

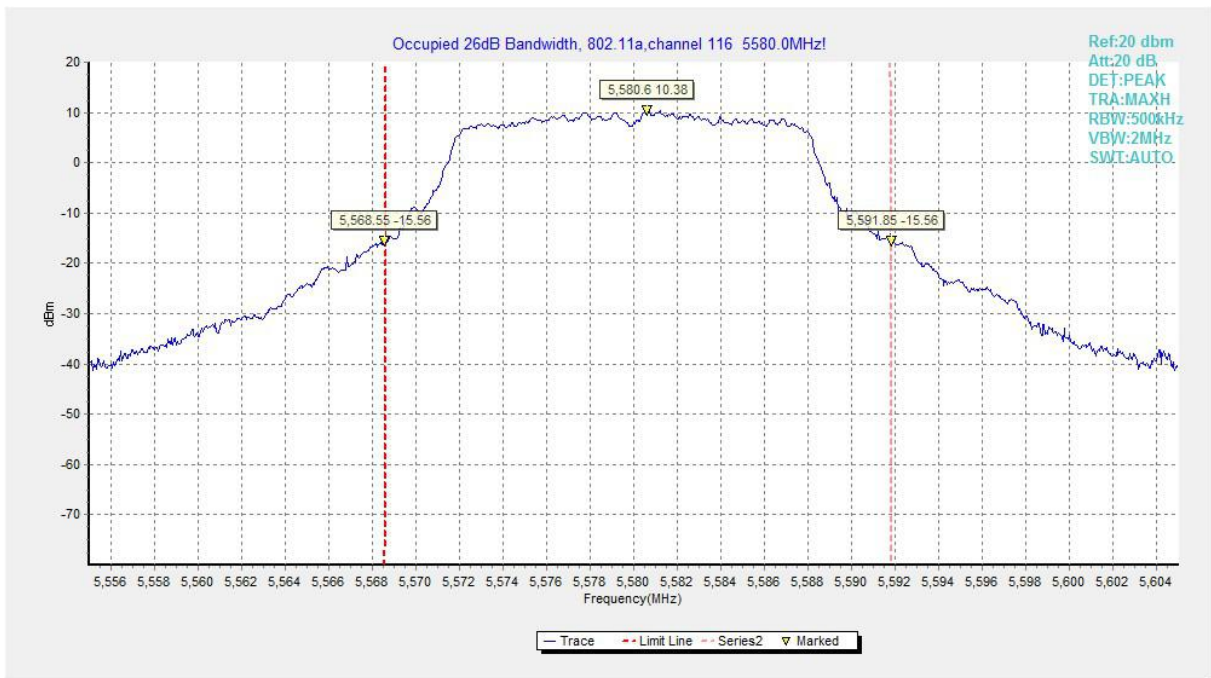


Fig.8 Occupied 26dB Bandwidth (802.11a, 5580MHz)



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

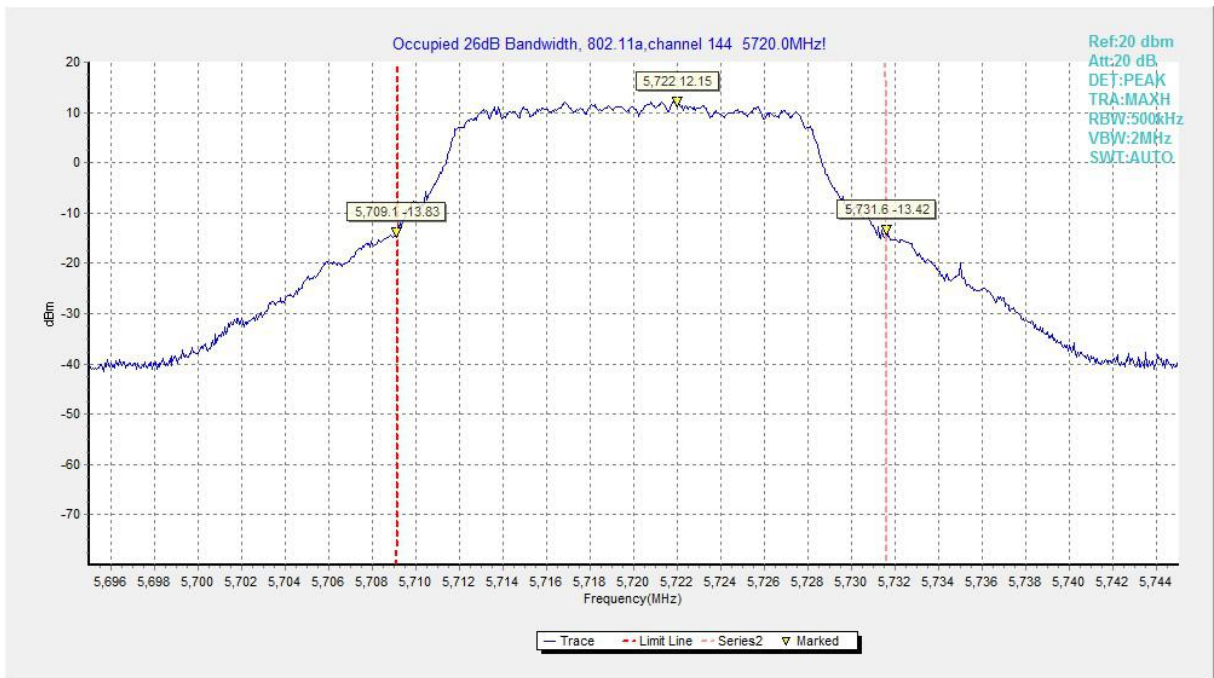


Fig.10 Occupied 26dB Bandwidth (802.11a, 5720MHz)

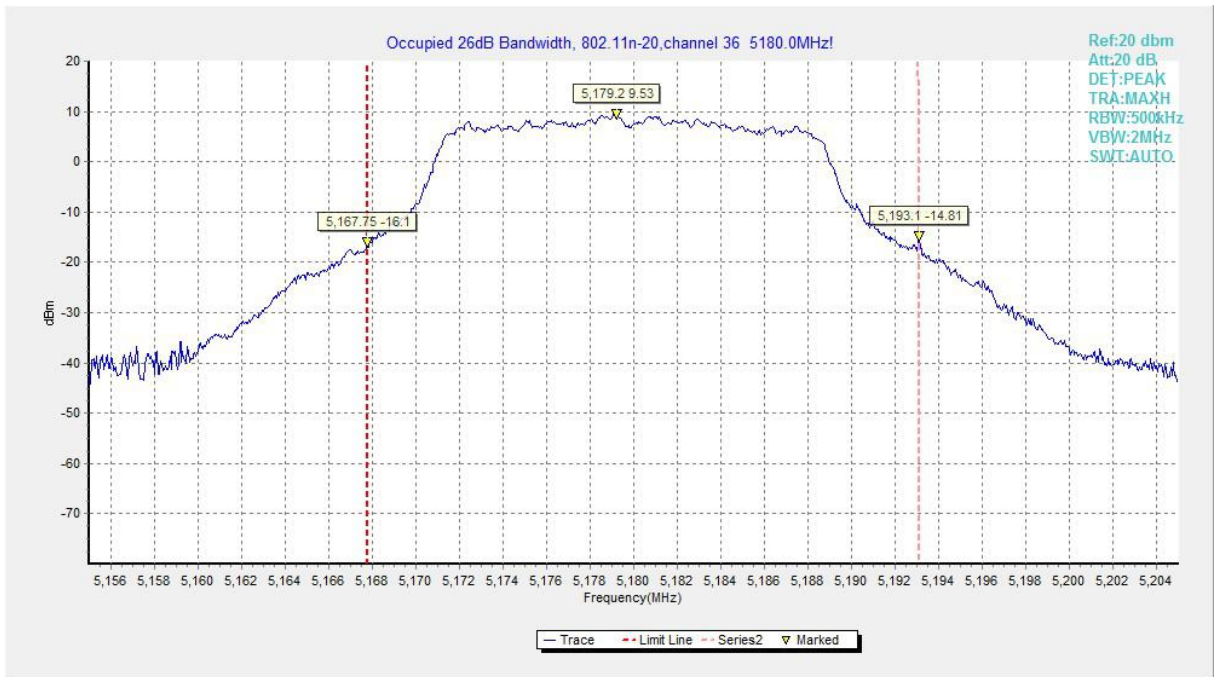


Fig.11 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

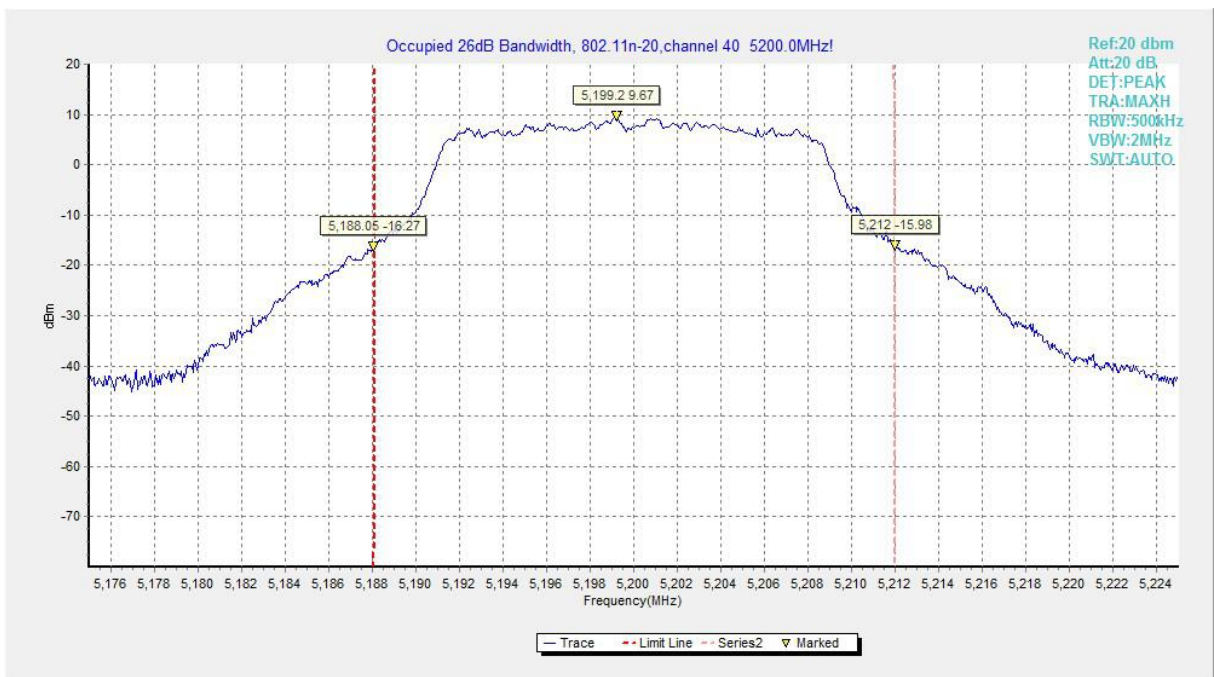


Fig.12 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

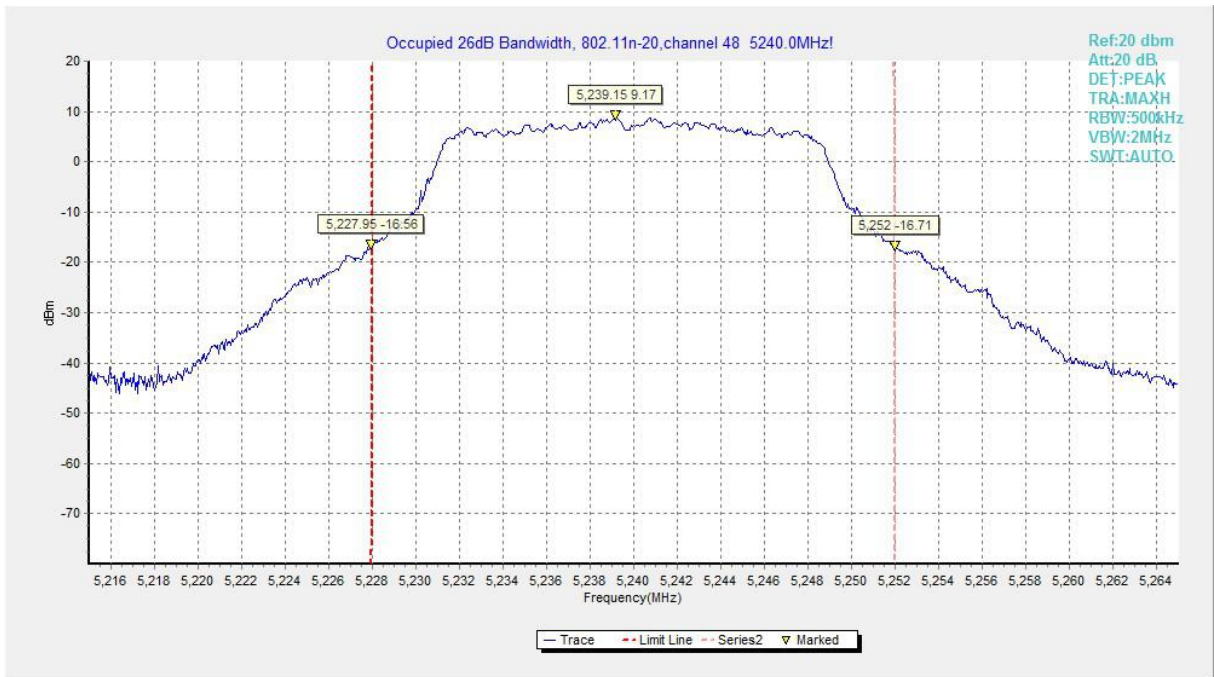


Fig.13 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

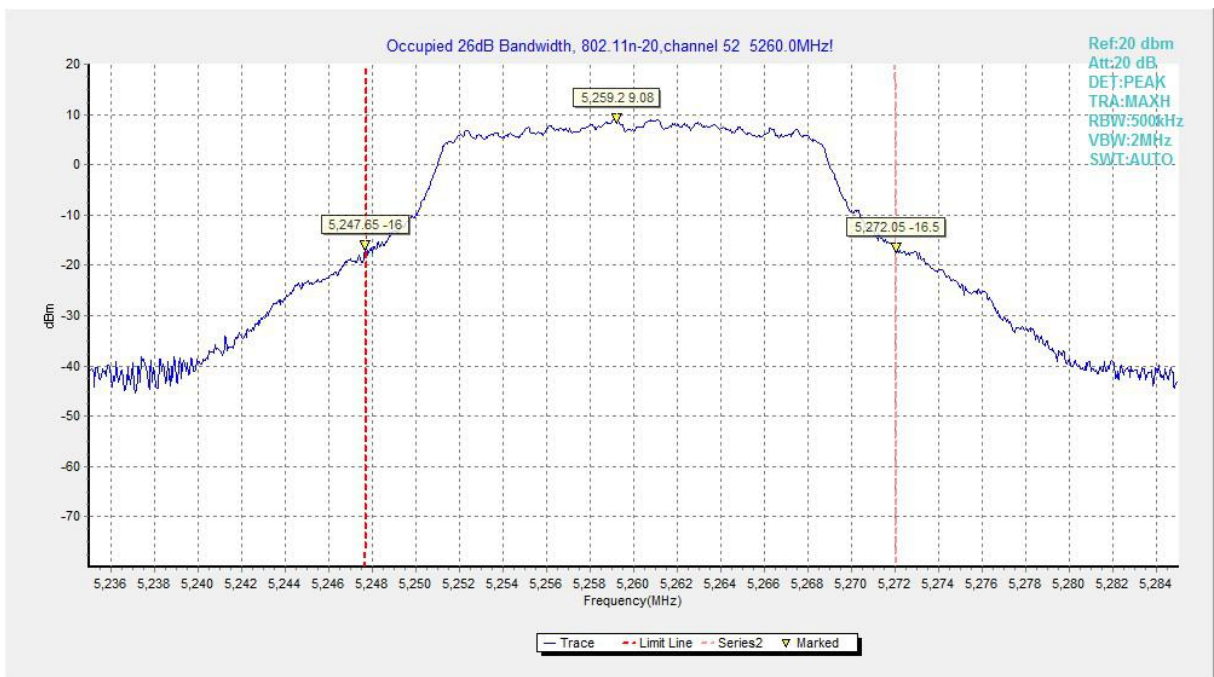


Fig.14 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

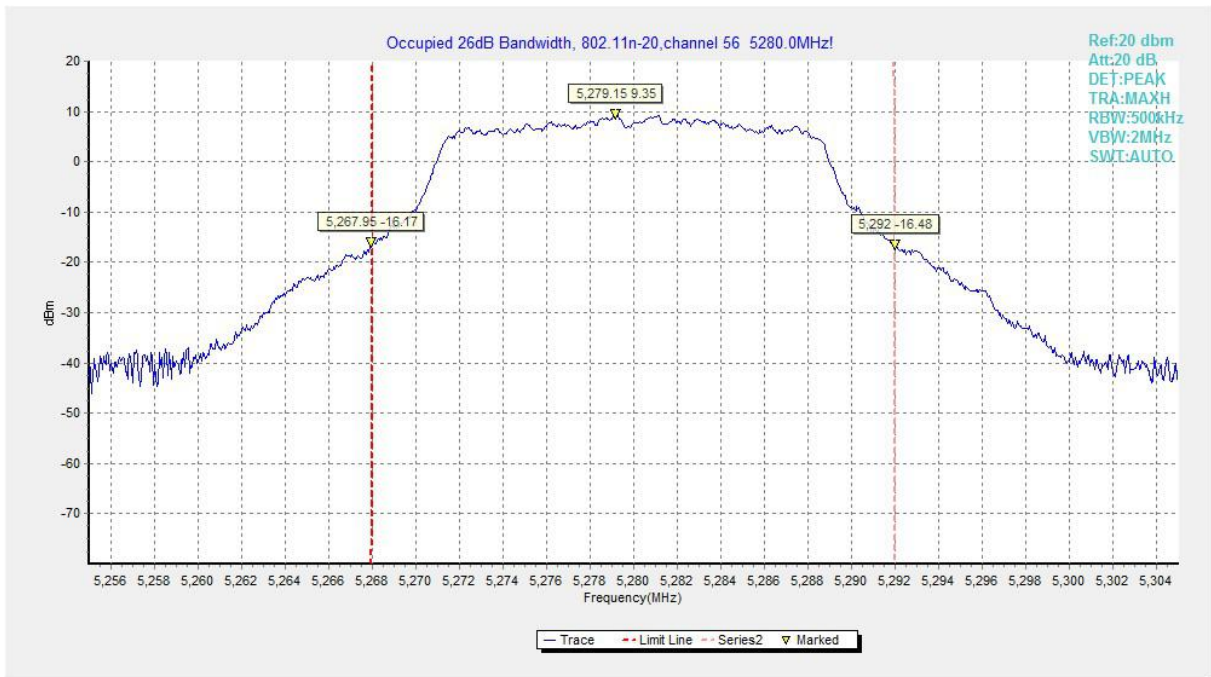


Fig.15 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

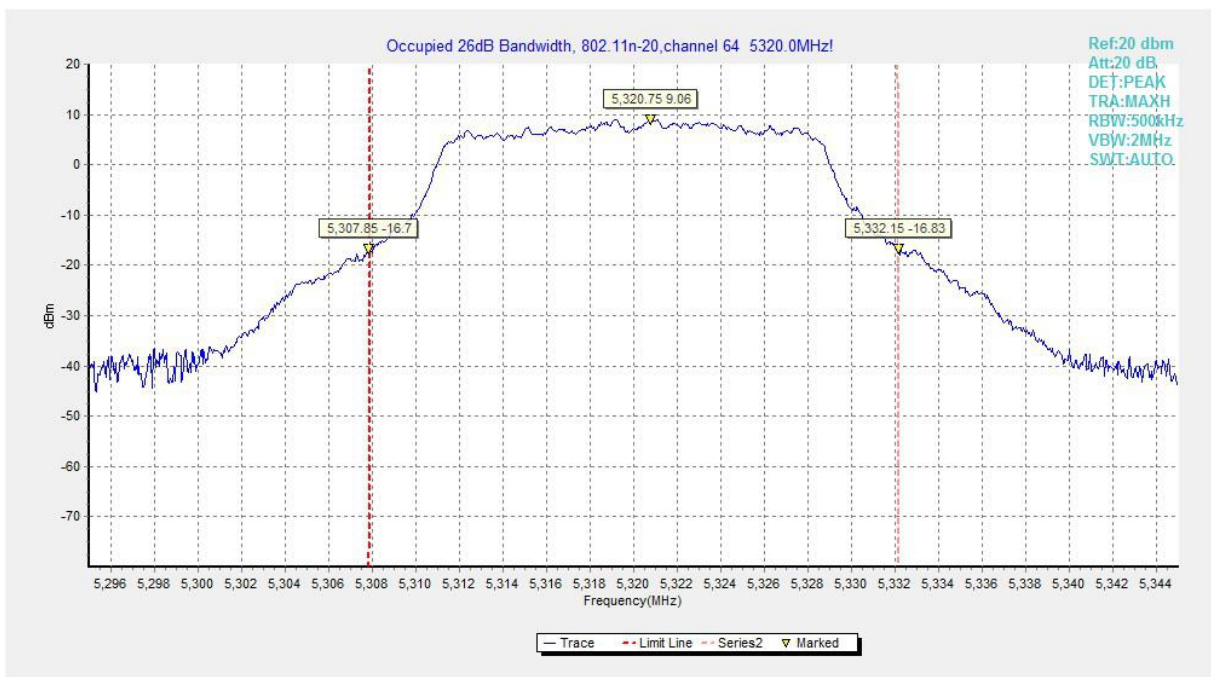


Fig.16 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

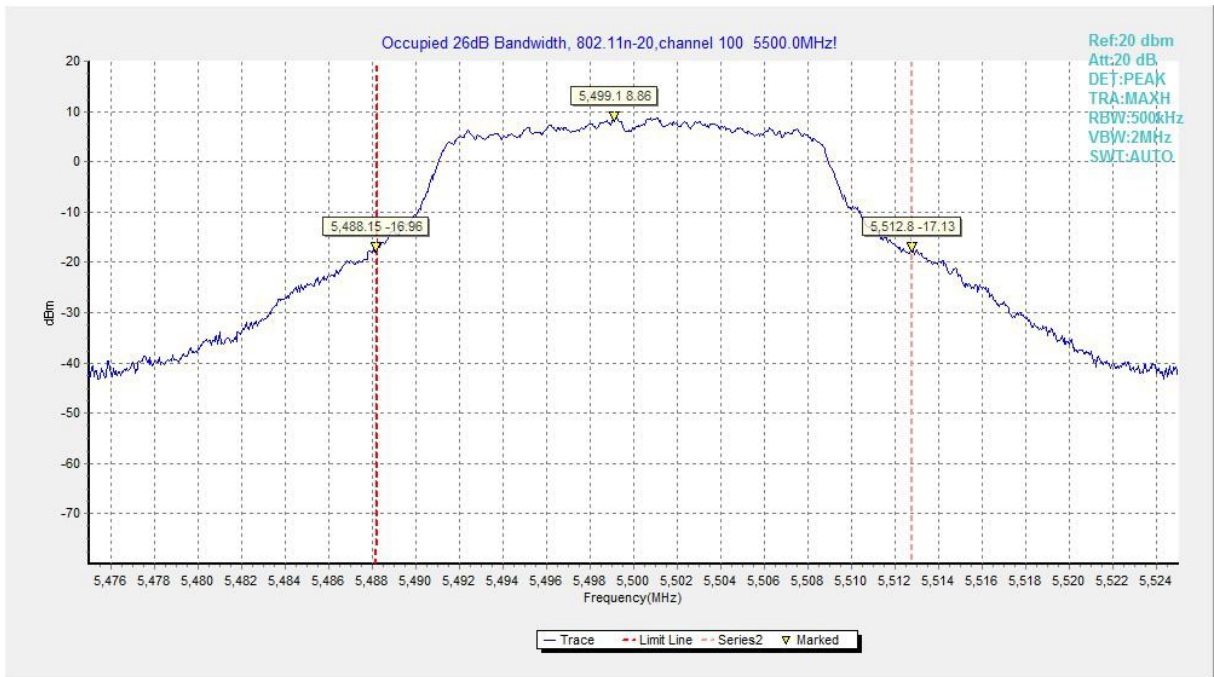


Fig.17 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)

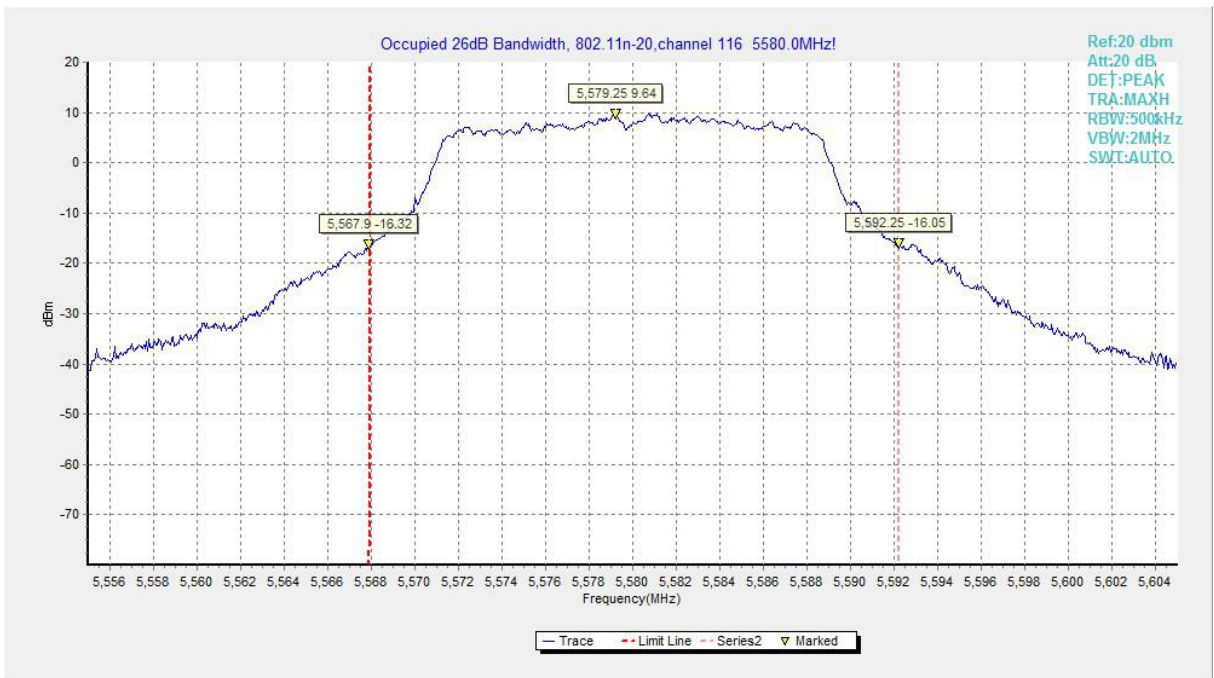


Fig.18 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

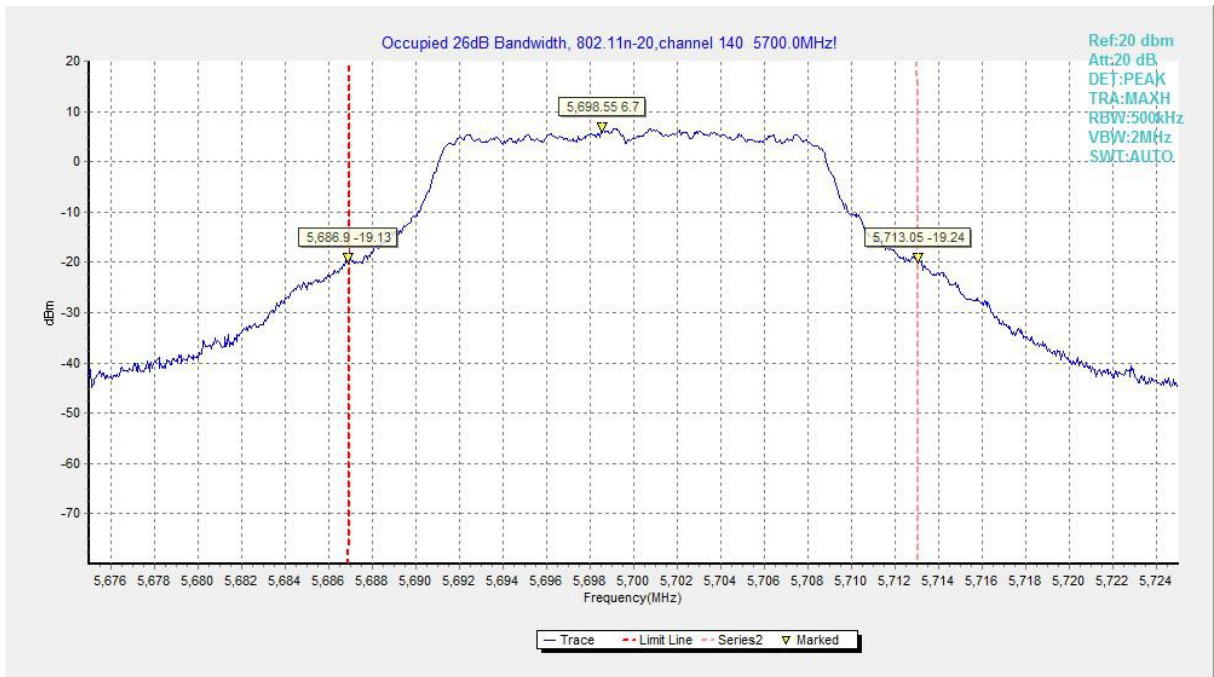


Fig.19 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

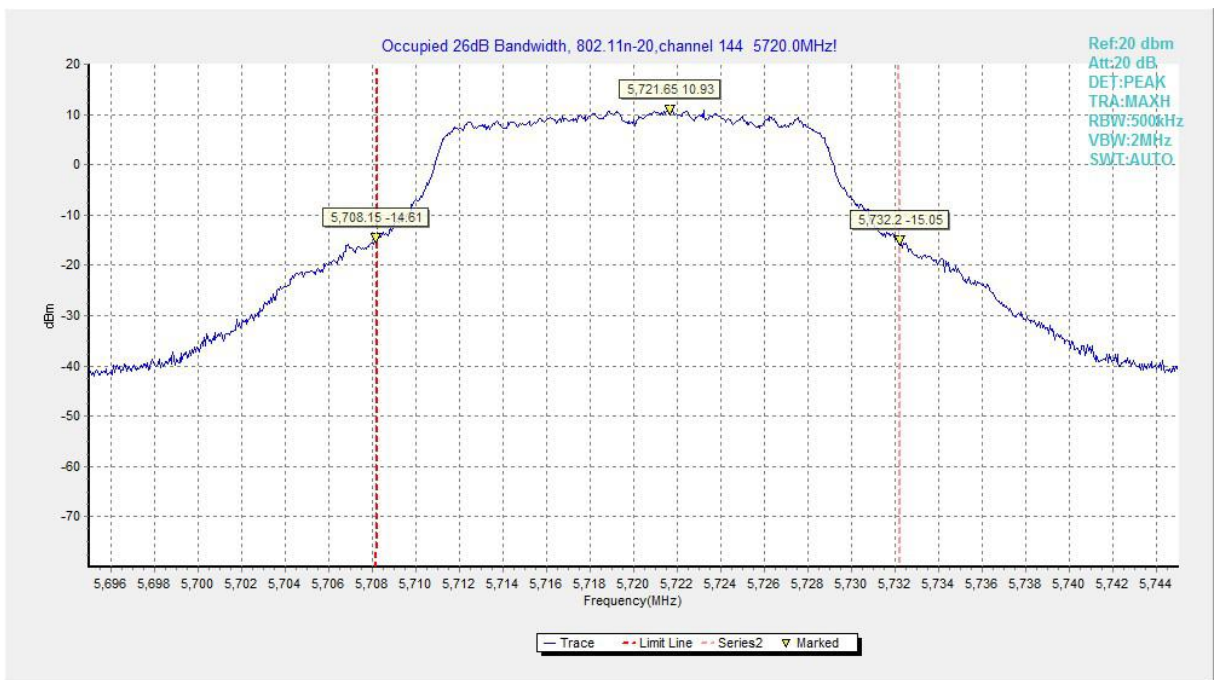


Fig.20 Occupied 26dB Bandwidth (802. 11n-HT20, 5720MHz)

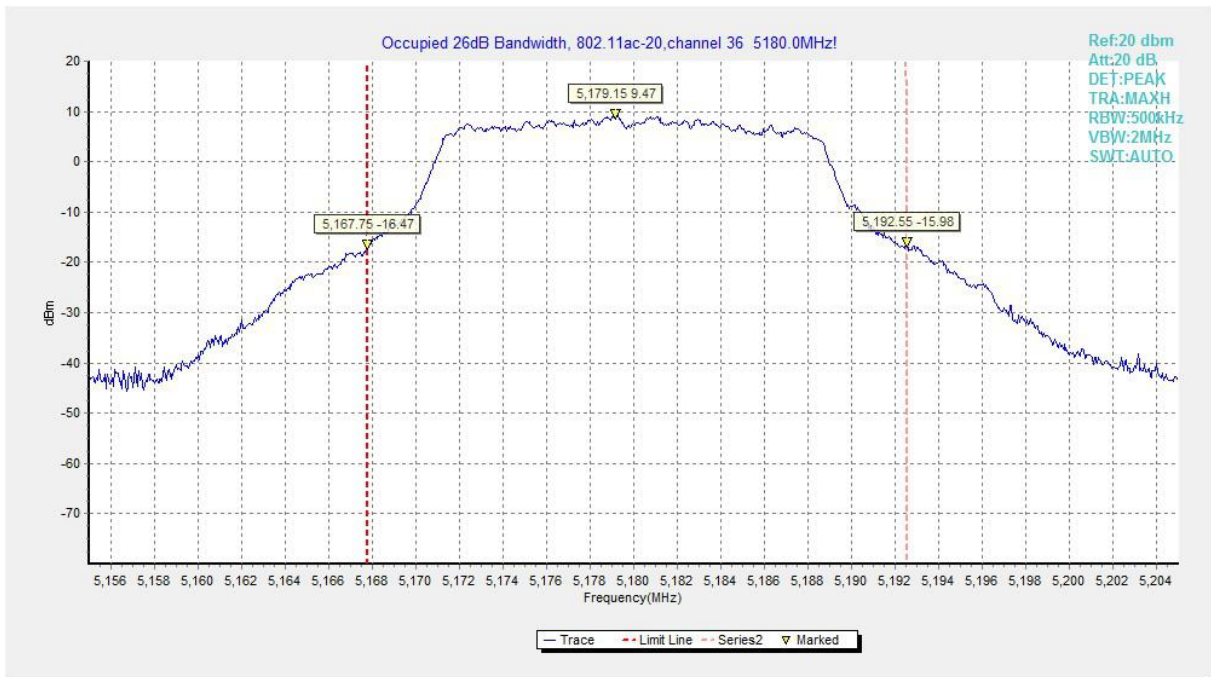


Fig.21 Occupied 26dB Bandwidth (802.11ac-HT20, 5180MHz)

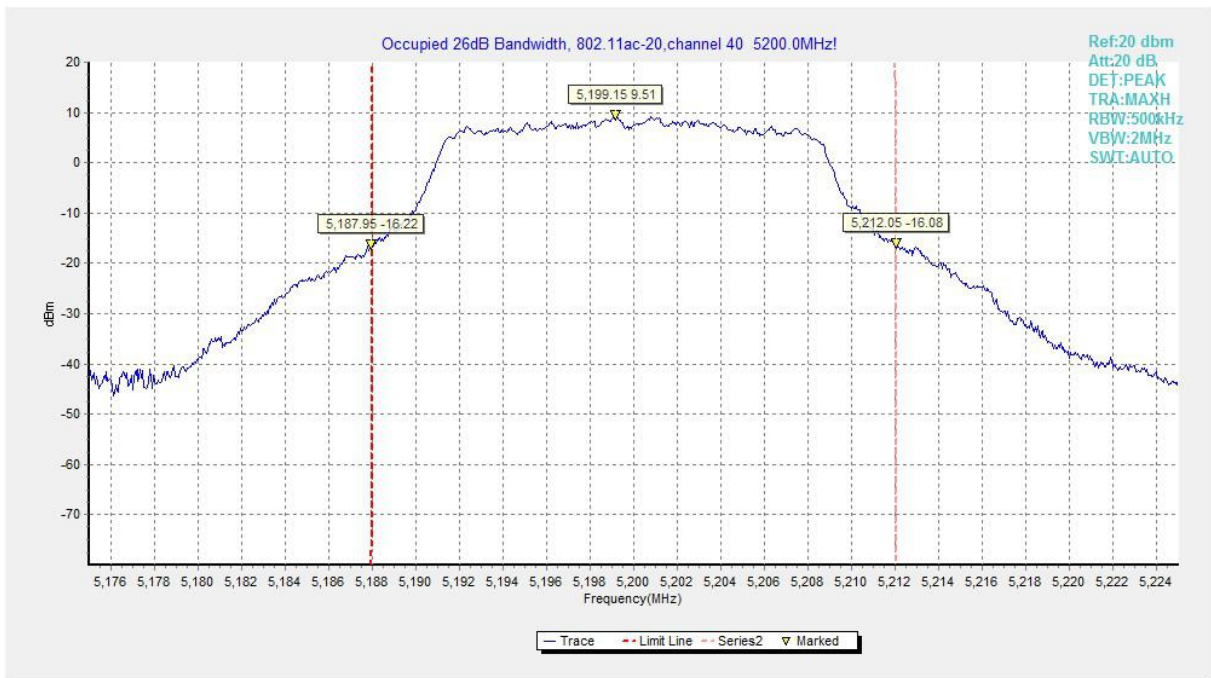


Fig.22 Occupied 26dB Bandwidth (802.11ac-HT20, 5200MHz)

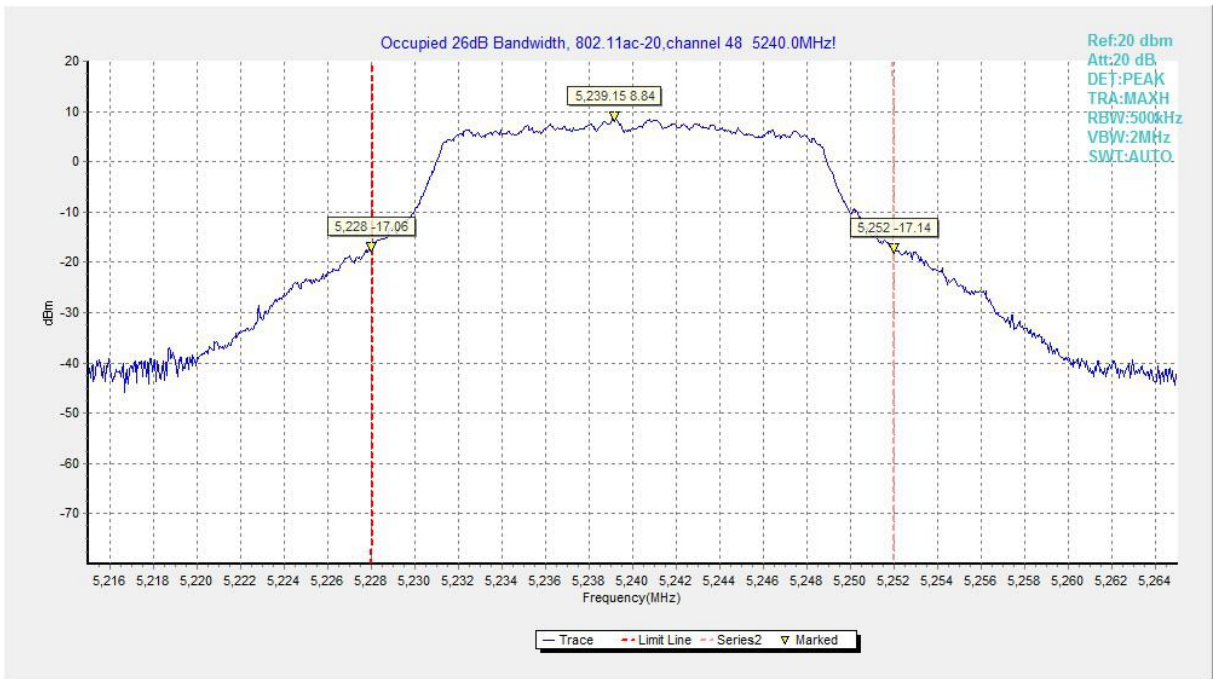


Fig.23 Occupied 26dB Bandwidth (802.11ac-HT20, 5240MHz)

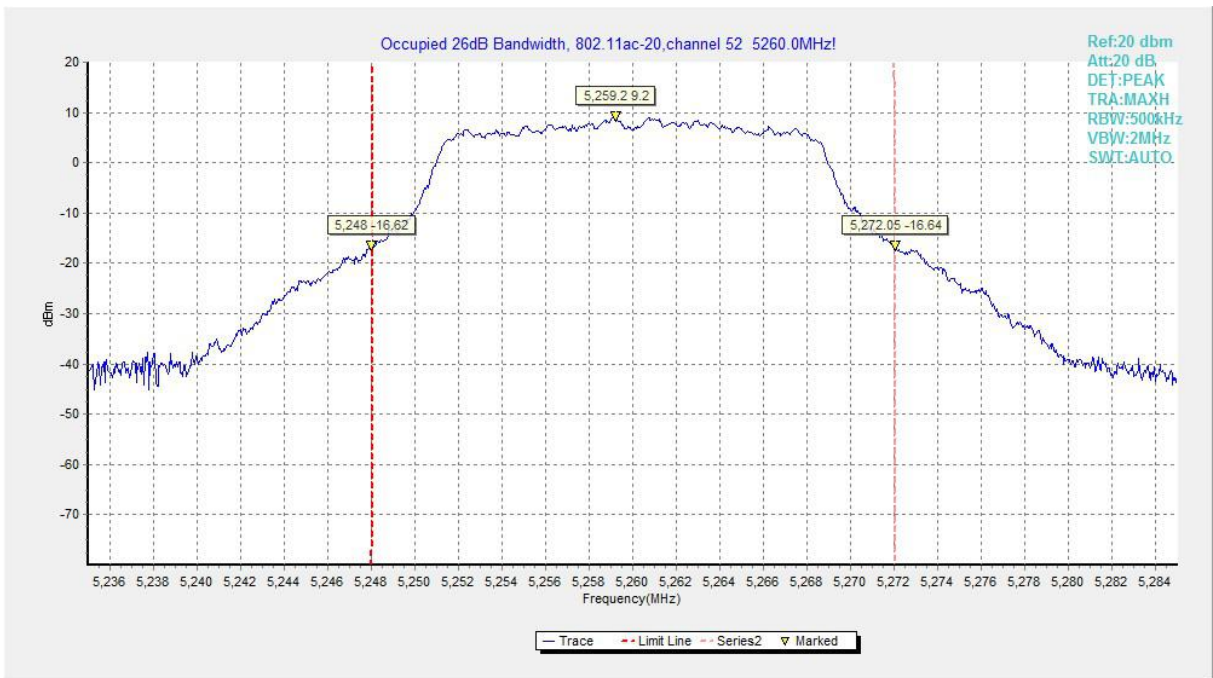


Fig.24 Occupied 26dB Bandwidth (802.11ac-HT20, 5260MHz)

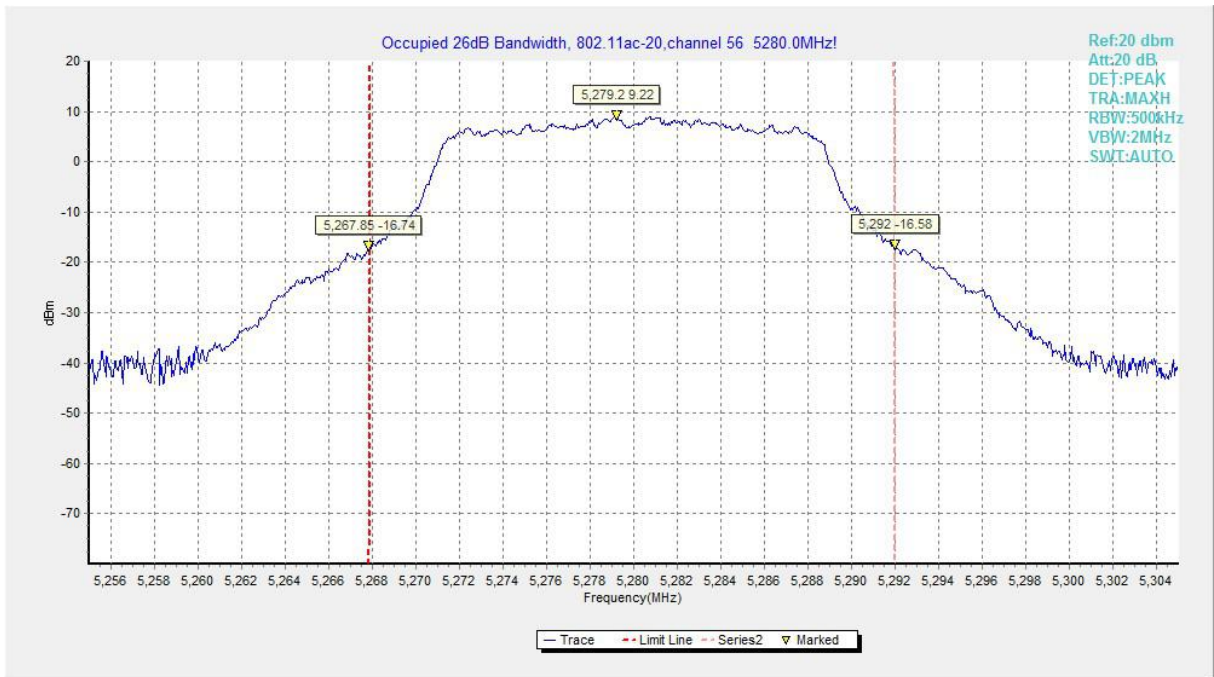


Fig.25 Occupied 26dB Bandwidth (802.11ac-HT20, 5280MHz)

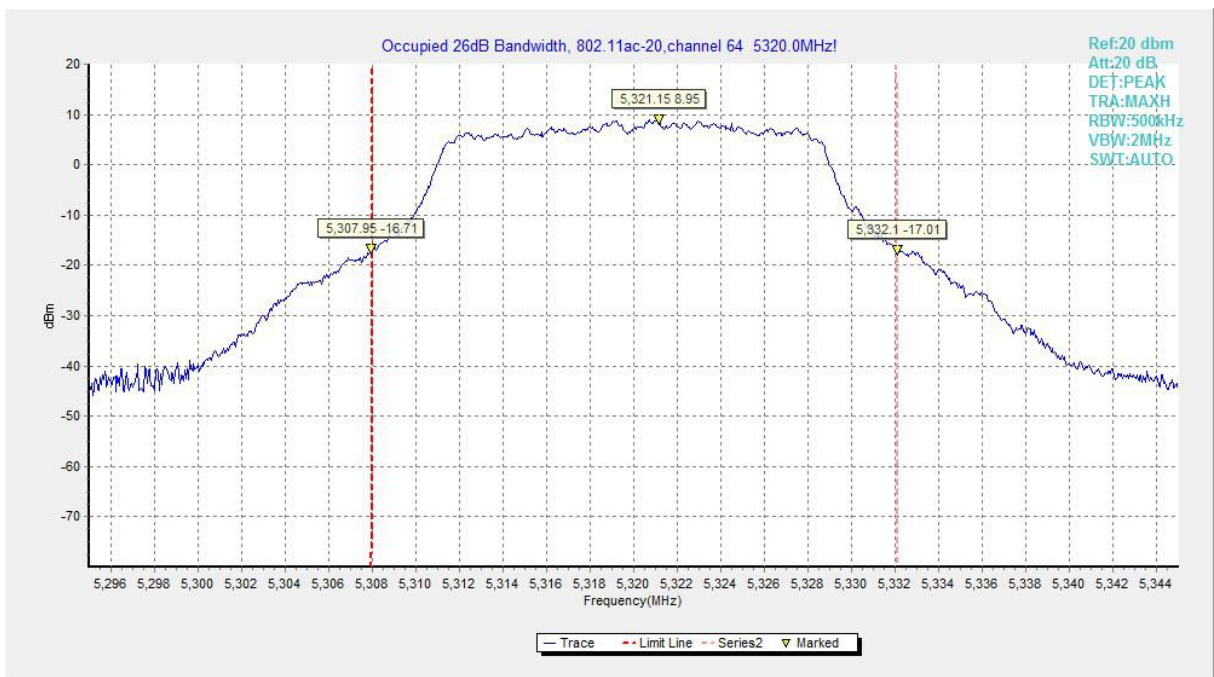


Fig.26 Occupied 26dB Bandwidth (802.11ac-HT20, 5320MHz)

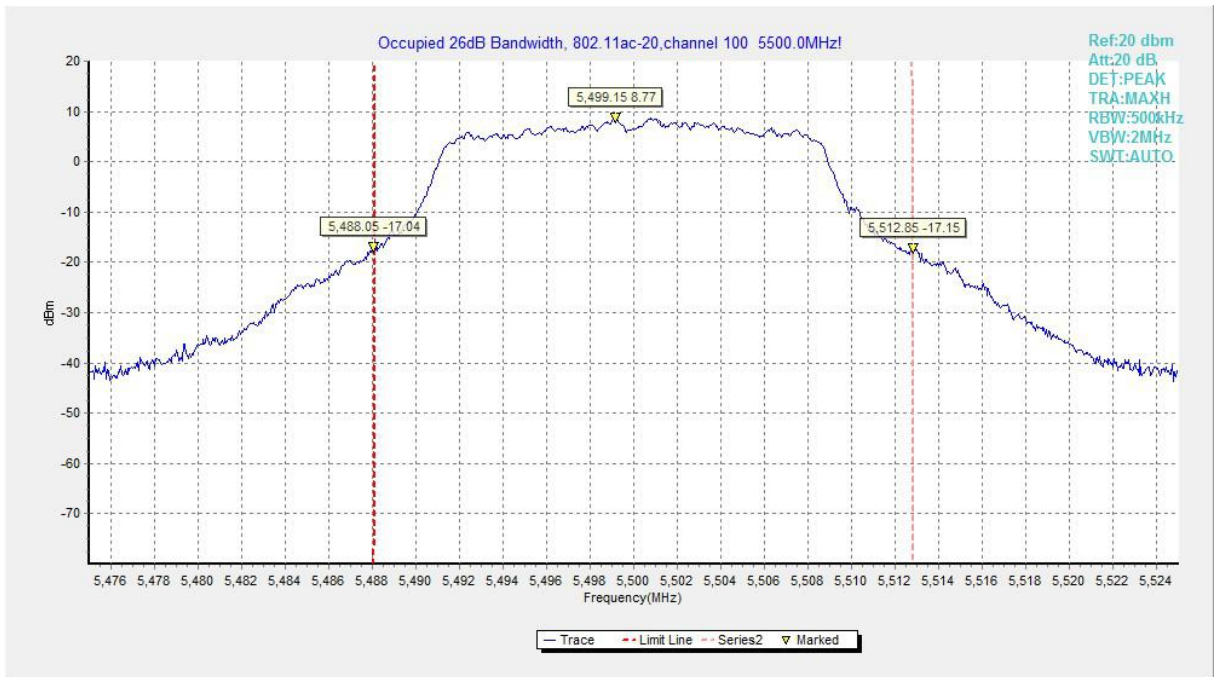


Fig.27 Occupied 26dB Bandwidth (802. 11ac-HT20, 5500MHz)

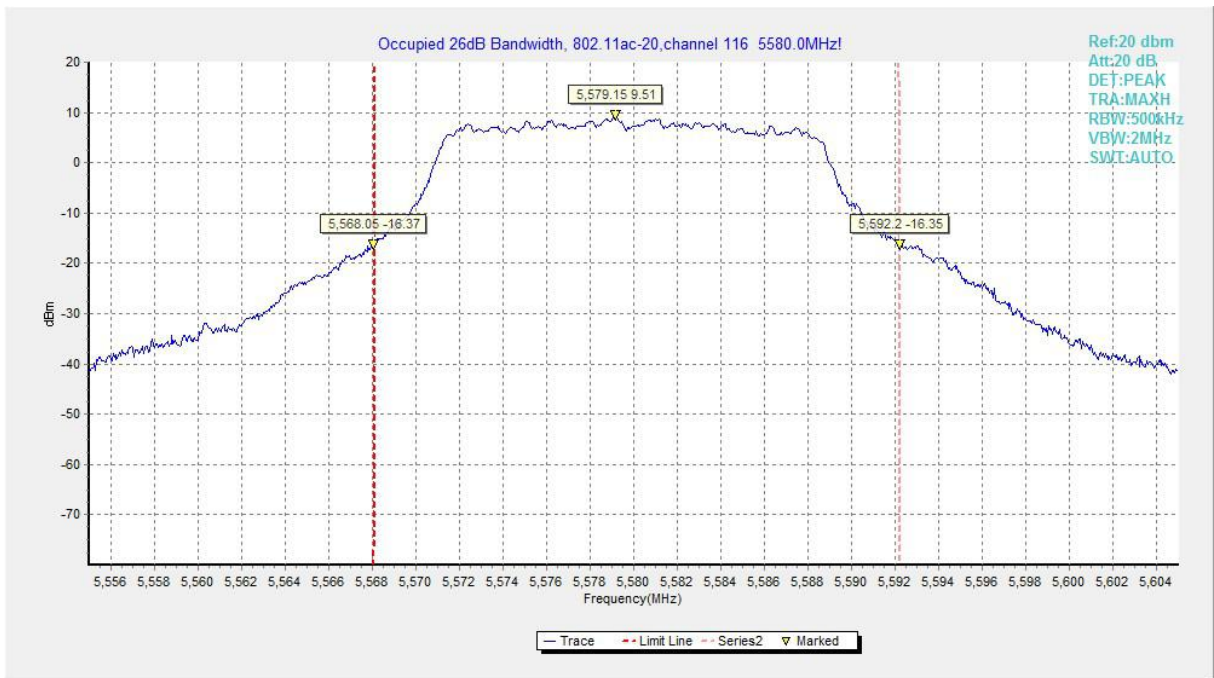


Fig.28 Occupied 26dB Bandwidth (802. 11ac-HT20, 5580MHz)

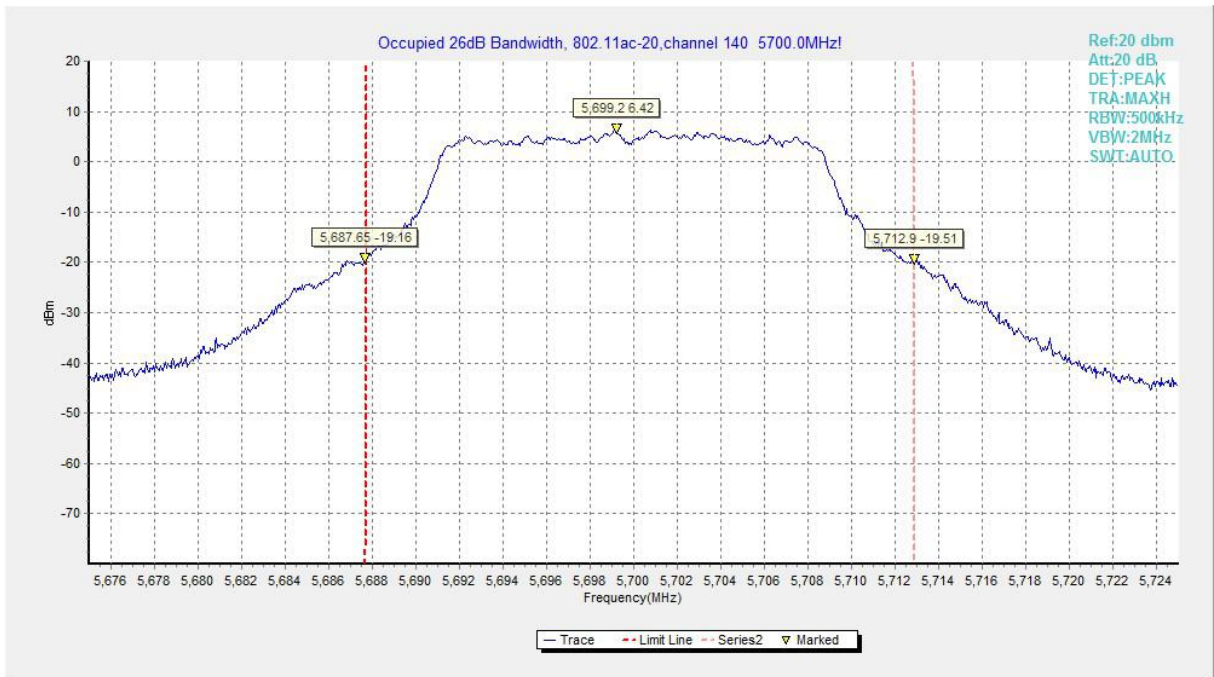


Fig.29 Occupied 26dB Bandwidth (802. 11ac-HT20, 5700MHz)

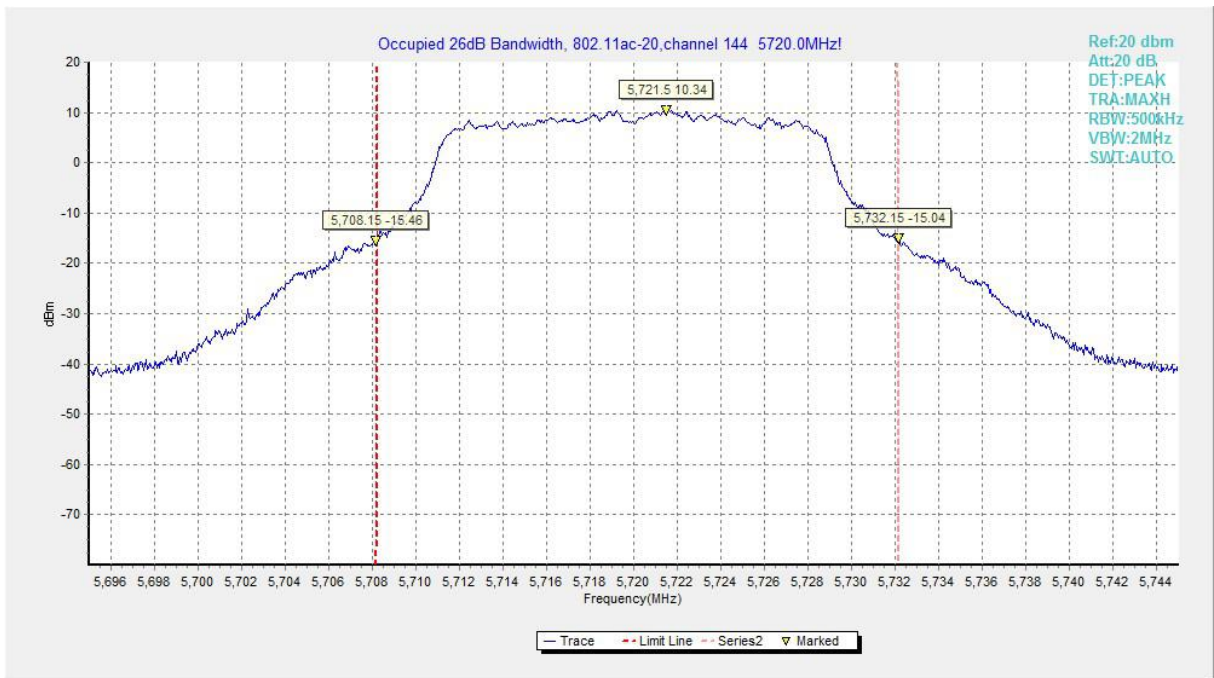


Fig.30 Occupied 26dB Bandwidth (802. 11ac-HT20, 5720MHz)

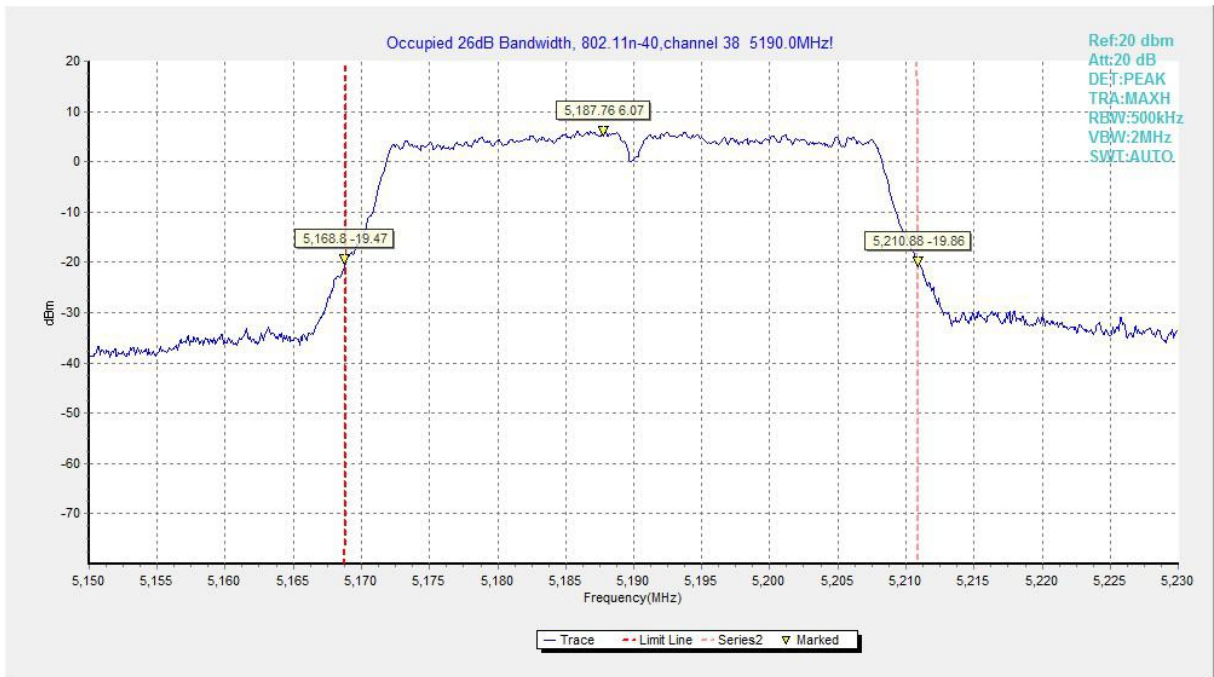


Fig.31 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

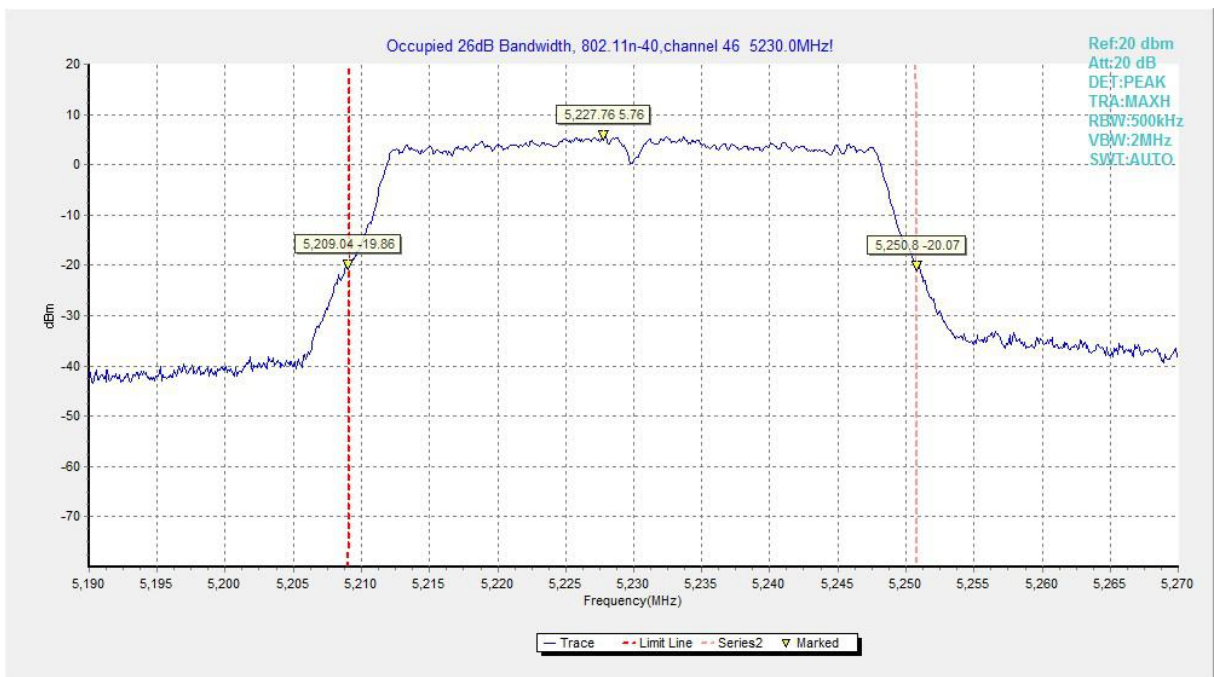


Fig.32 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

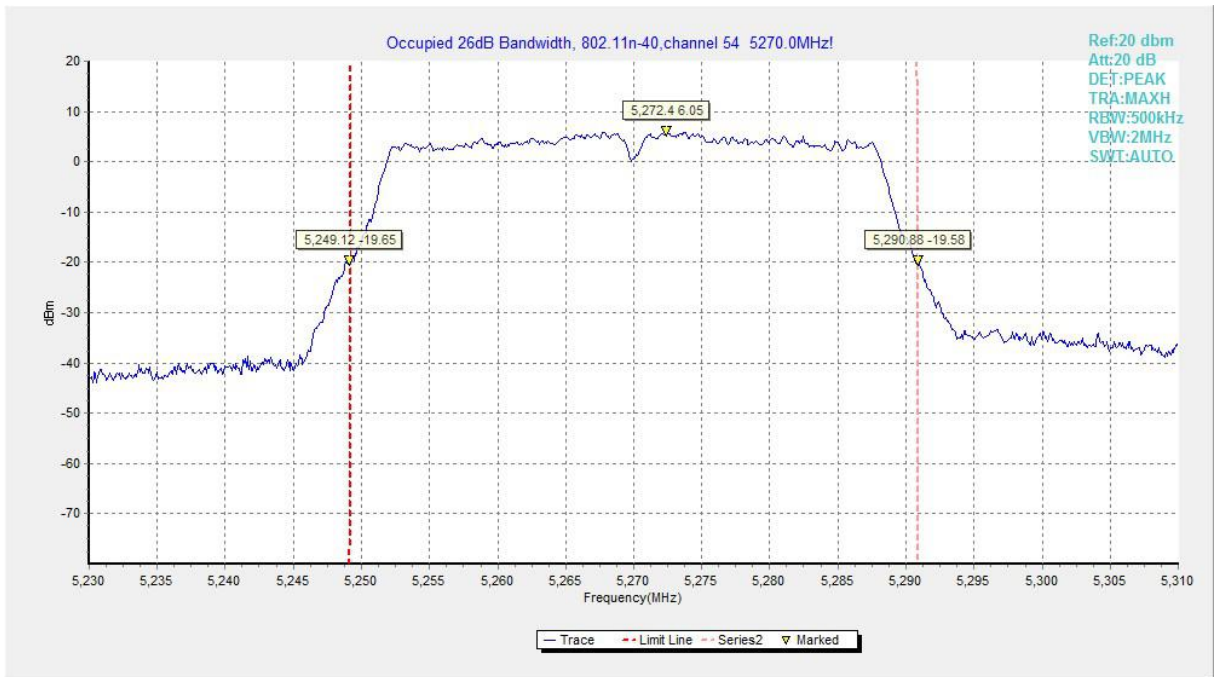


Fig.33 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

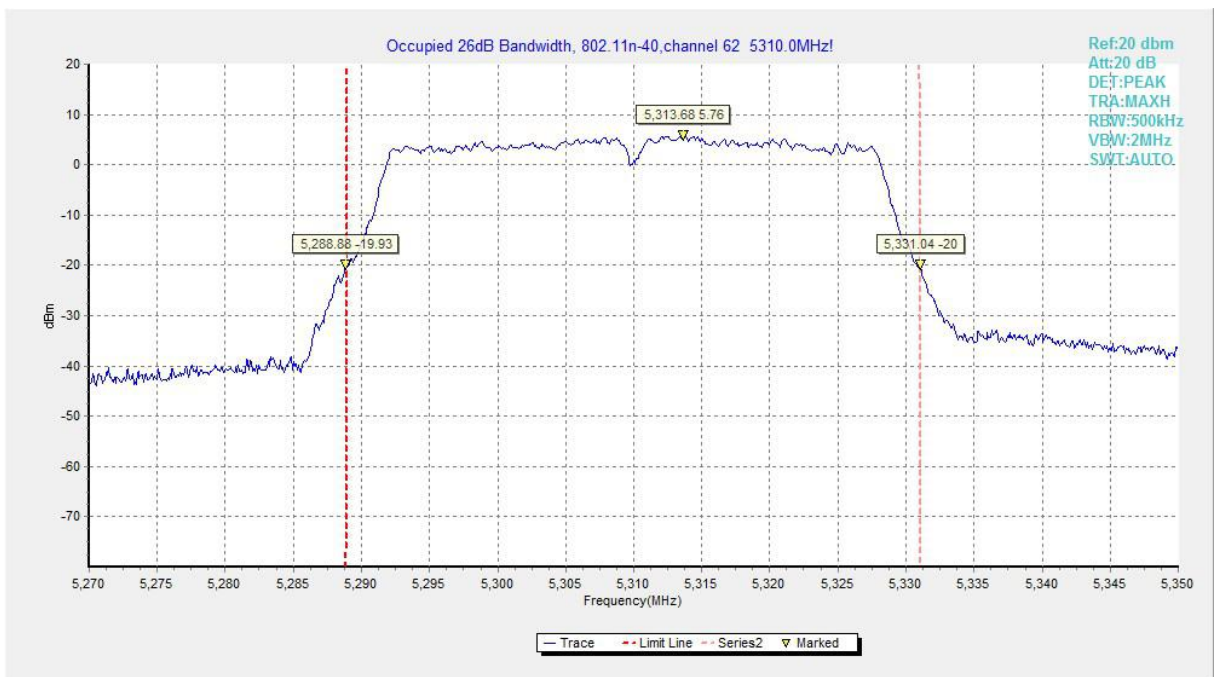


Fig.34 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

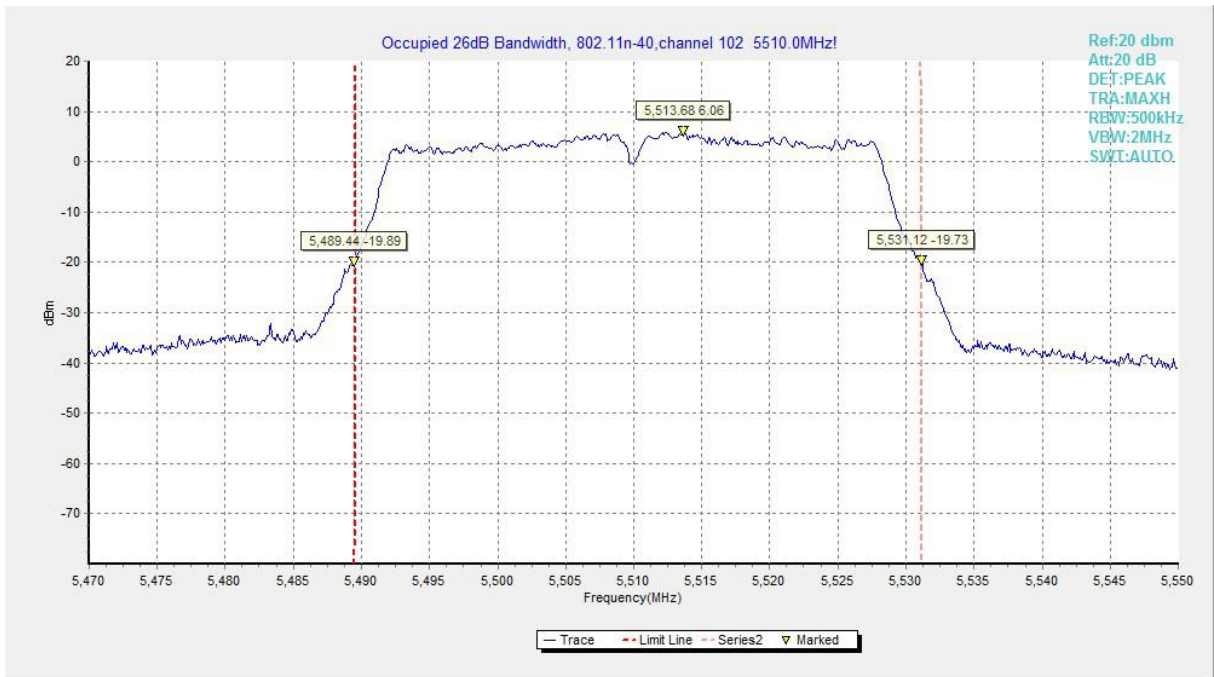


Fig.35 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

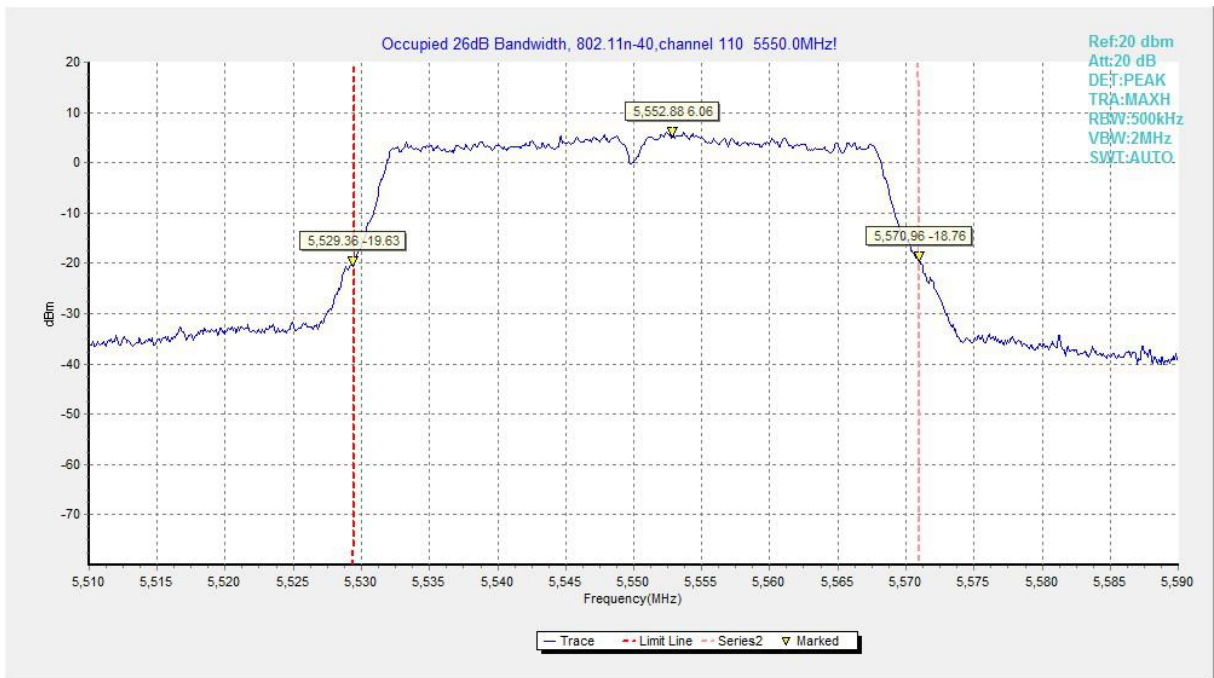


Fig.36 Occupied 26dB Bandwidth (802. 11n-HT40, 5550MHz)

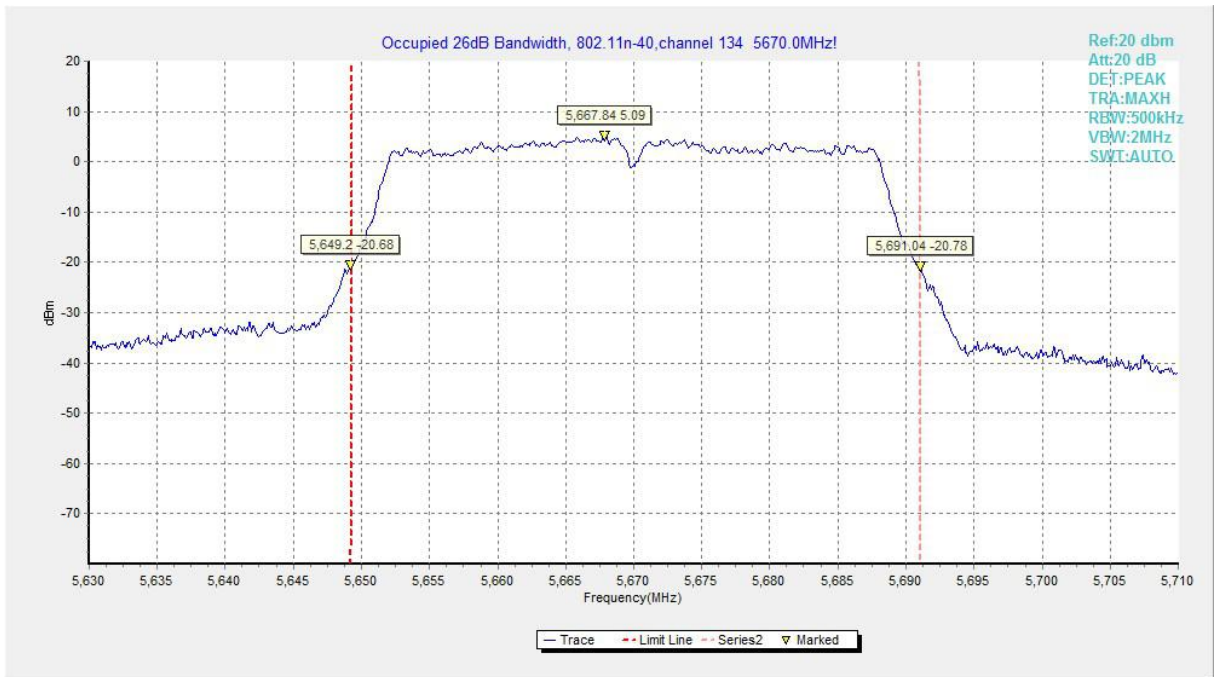


Fig.37 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

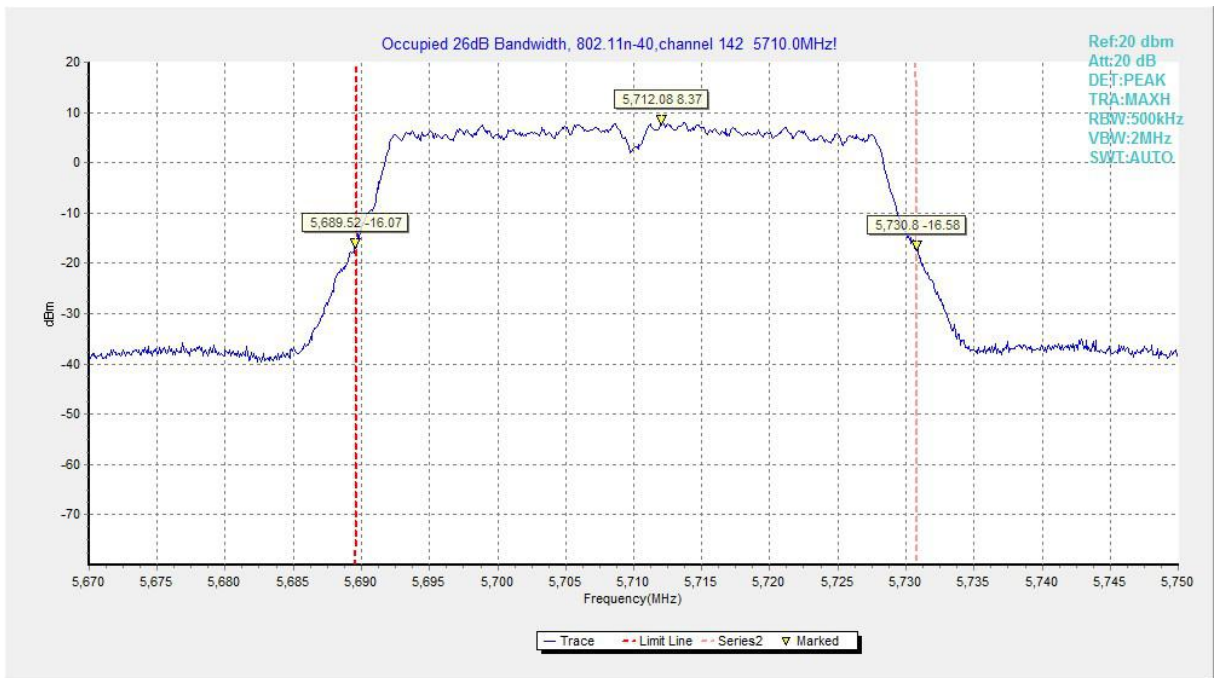


Fig.38 Occupied 26dB Bandwidth (802. 11n-HT40, 5710MHz)

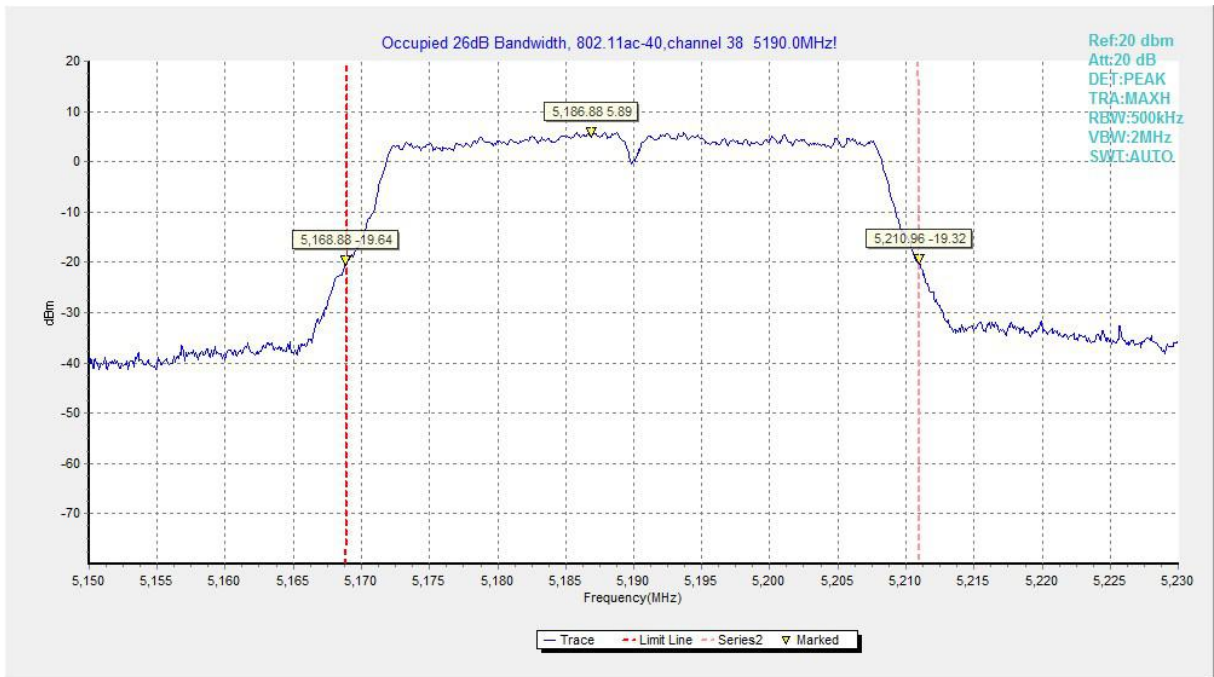


Fig.39 Occupied 26dB Bandwidth (802.11ac-HT40, 5190MHz)

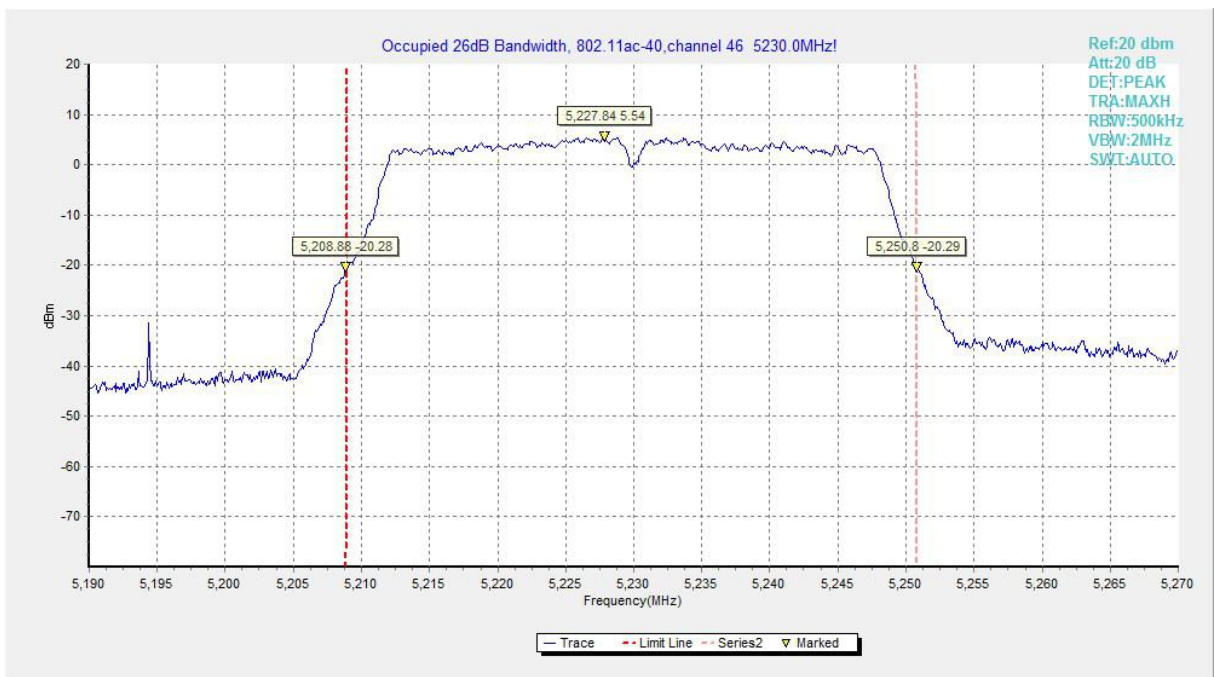


Fig.40 Occupied 26dB Bandwidth (802.11ac-HT40, 5230MHz)

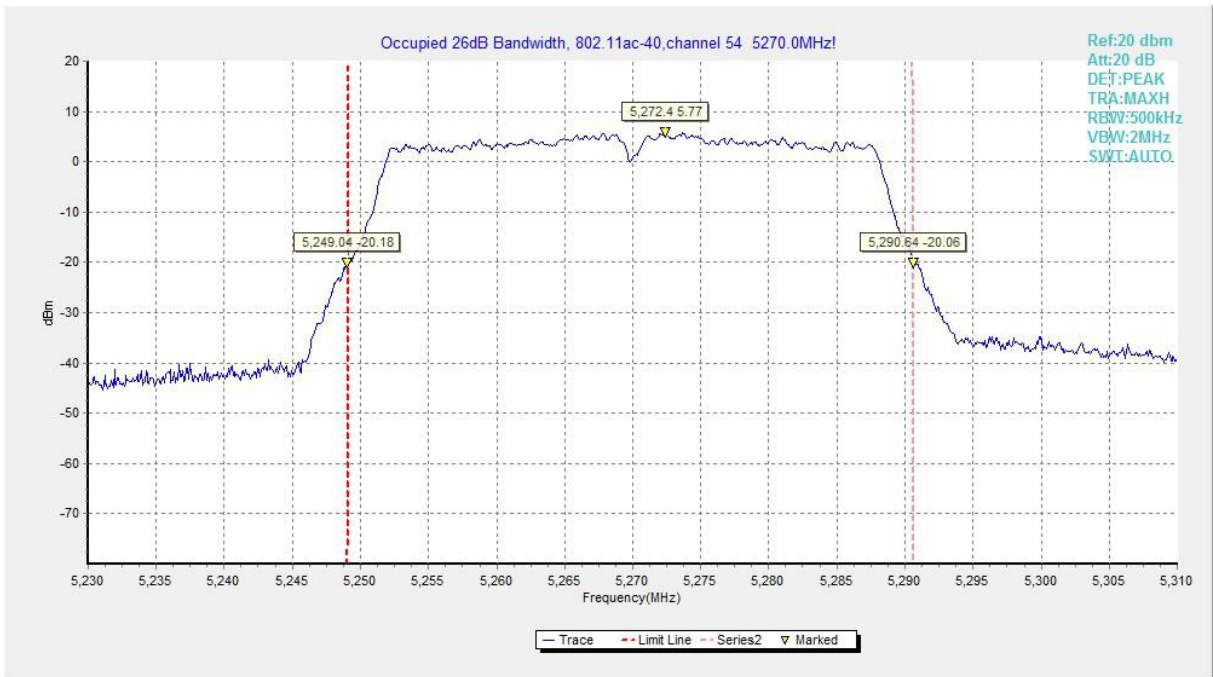


Fig.41 Occupied 26dB Bandwidth (802.11ac-HT40, 5270MHz)

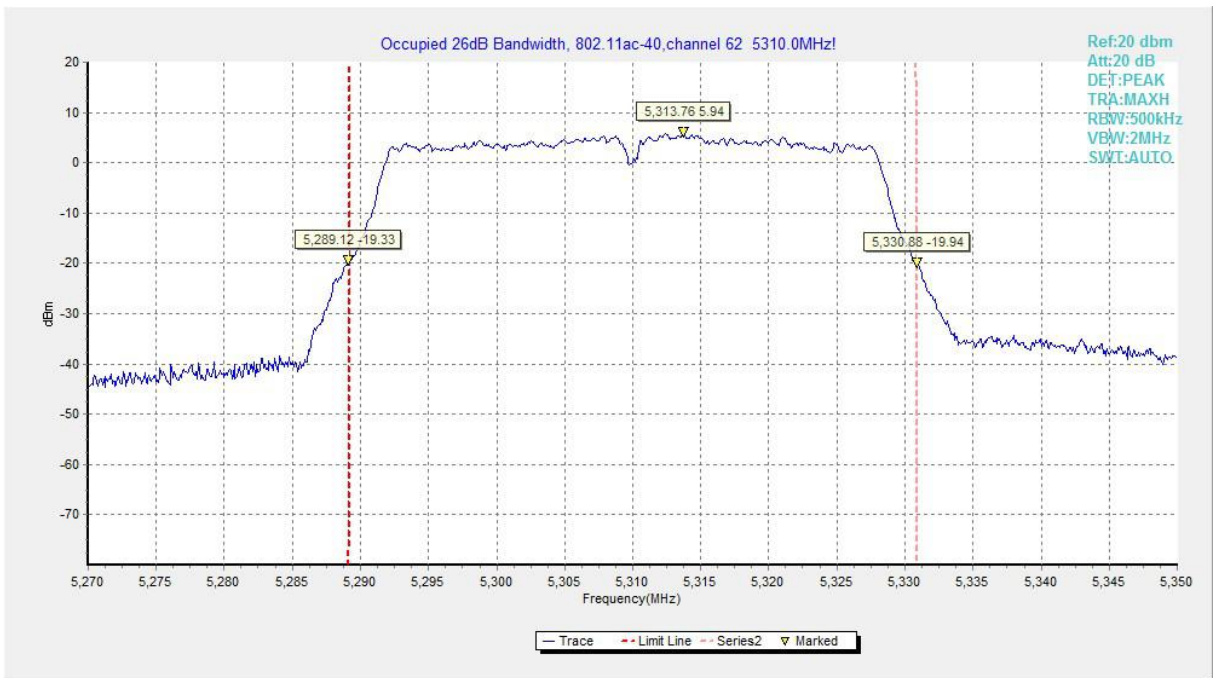


Fig.42 Occupied 26dB Bandwidth (802.11ac-HT40, 5310MHz)

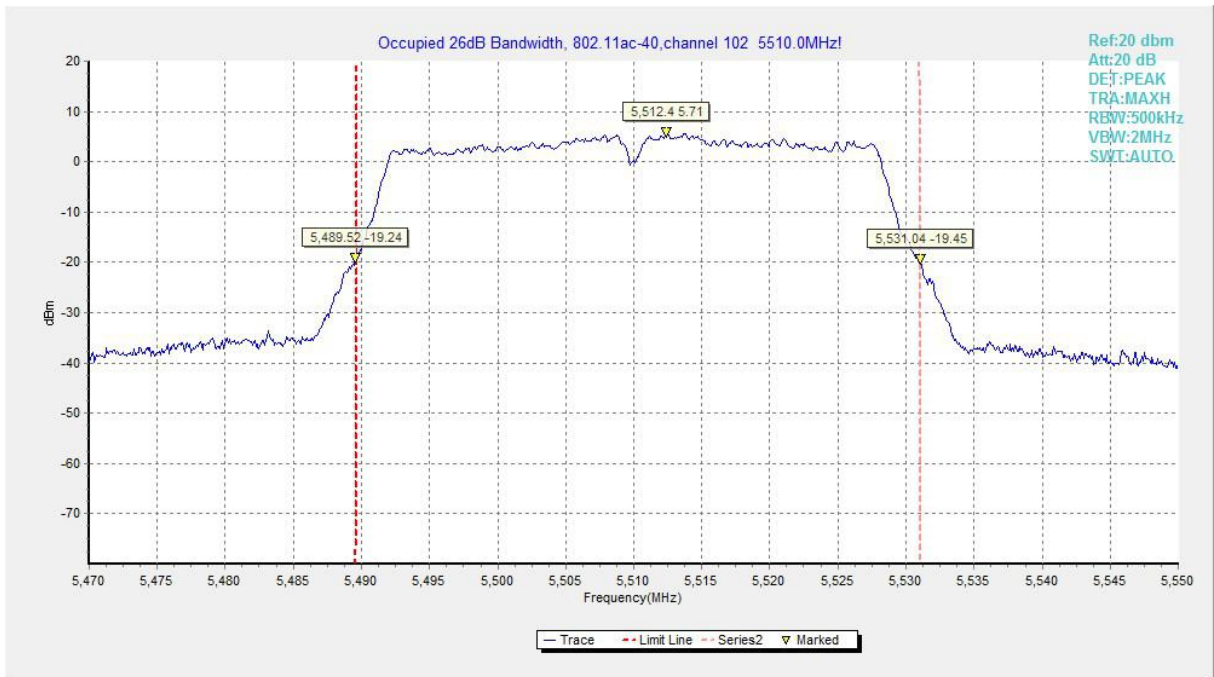


Fig.43 Occupied 26dB Bandwidth (802.11ac-HT40, 5510MHz)

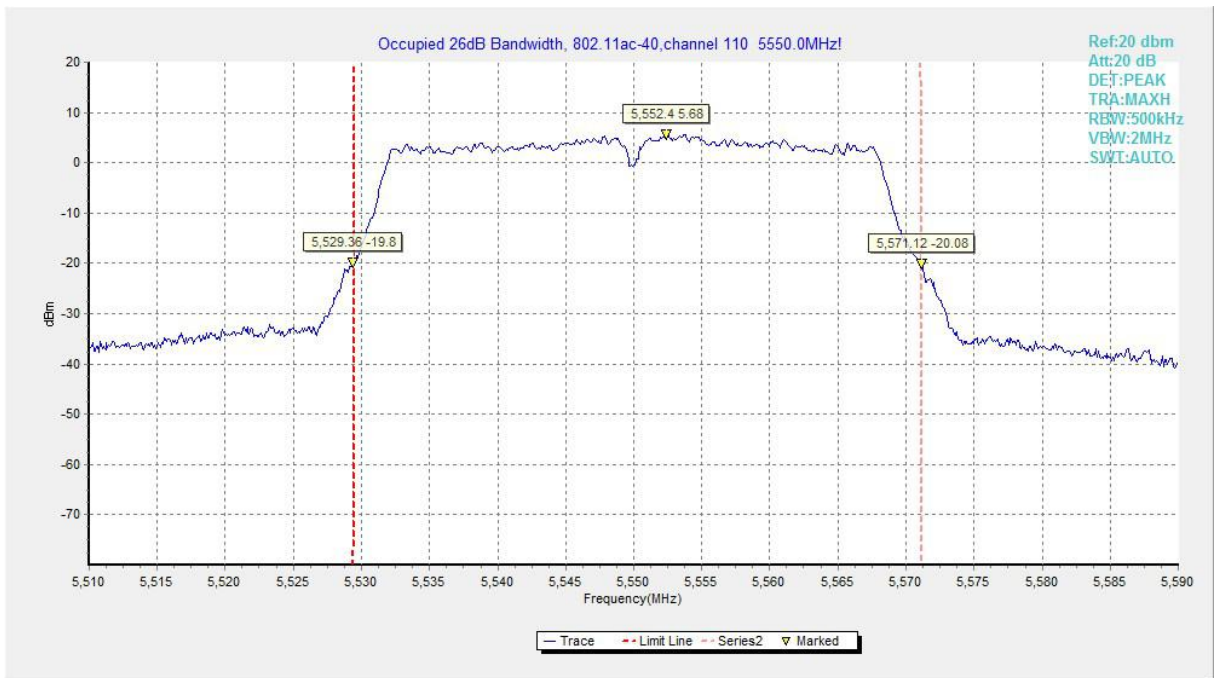


Fig.44 Occupied 26dB Bandwidth (802. 11ac-HT40, 5550MHz)

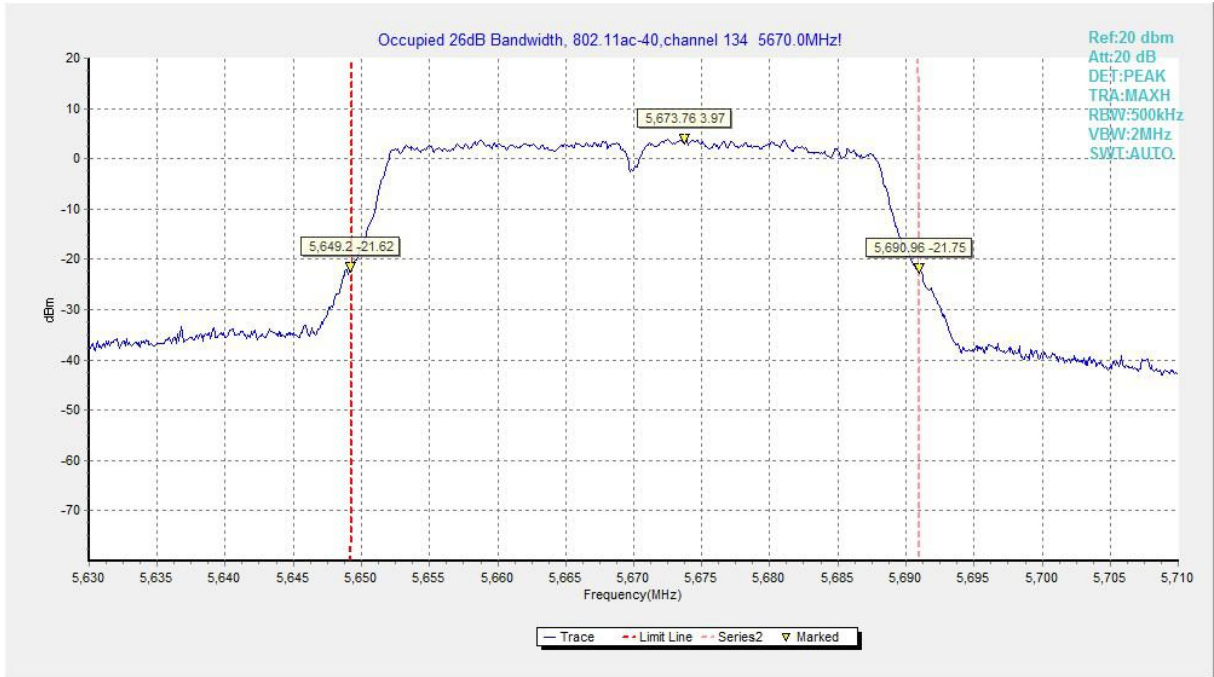


Fig.45 Occupied 26dB Bandwidth (802. 11ac-HT40, 5670MHz)

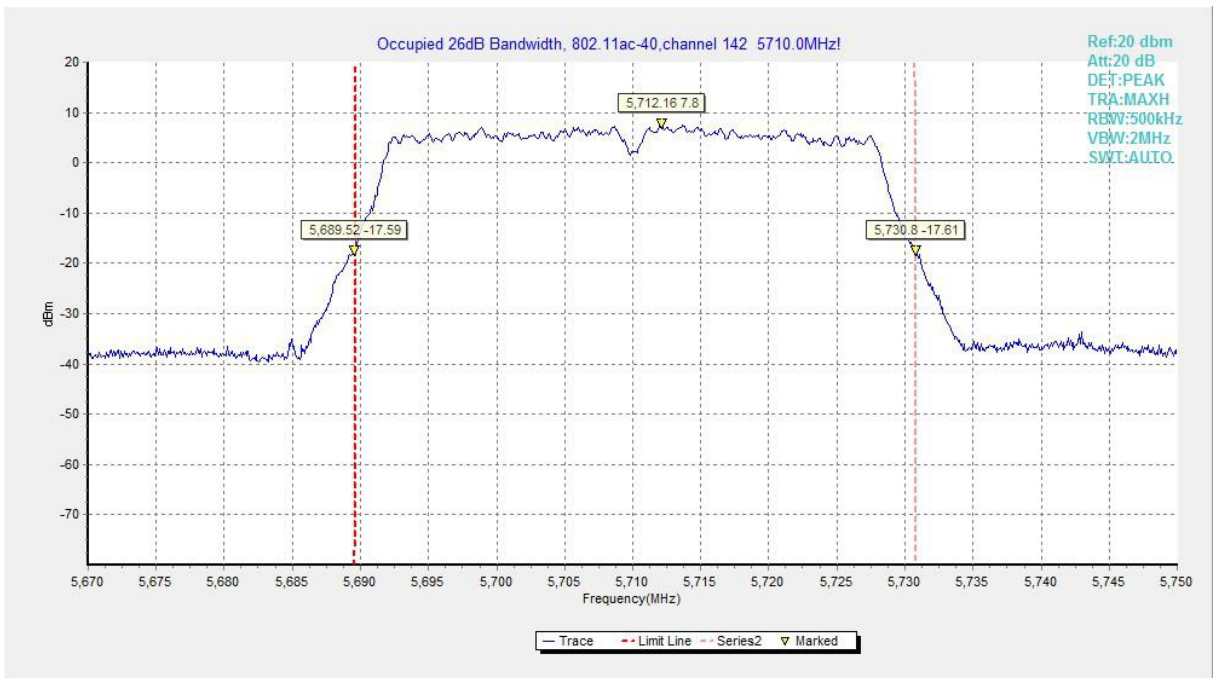


Fig.46 Occupied 26dB Bandwidth (802. 11ac-HT40, 5710MHz)

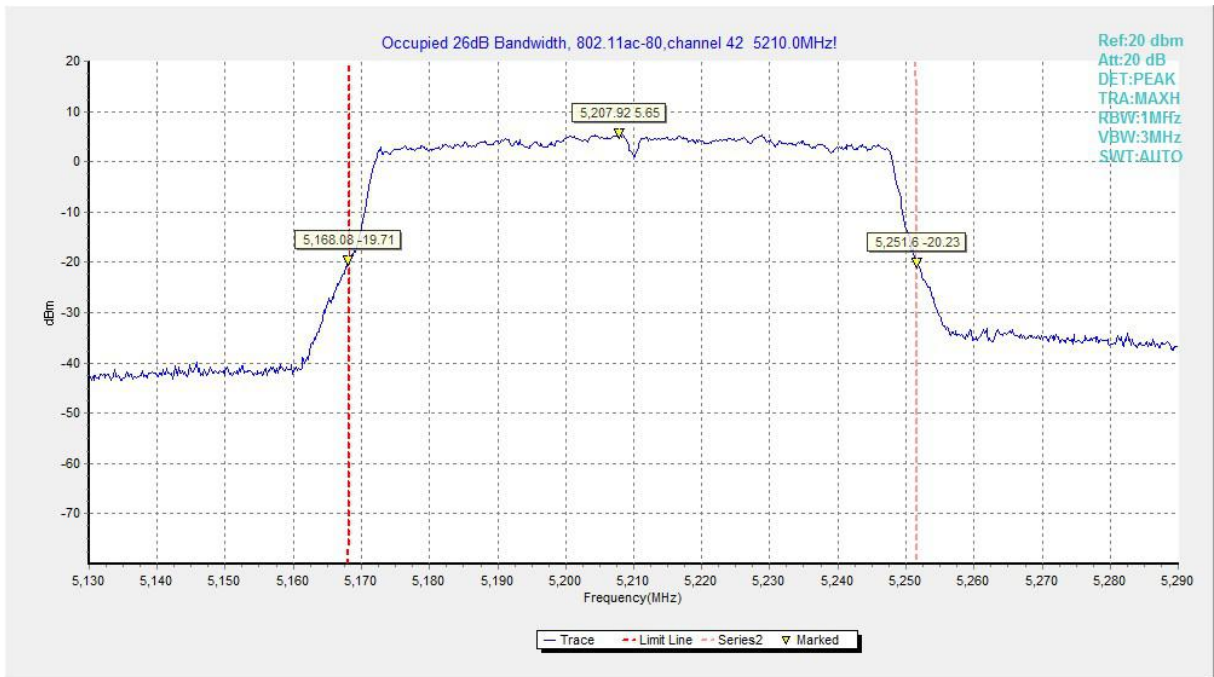


Fig.47 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

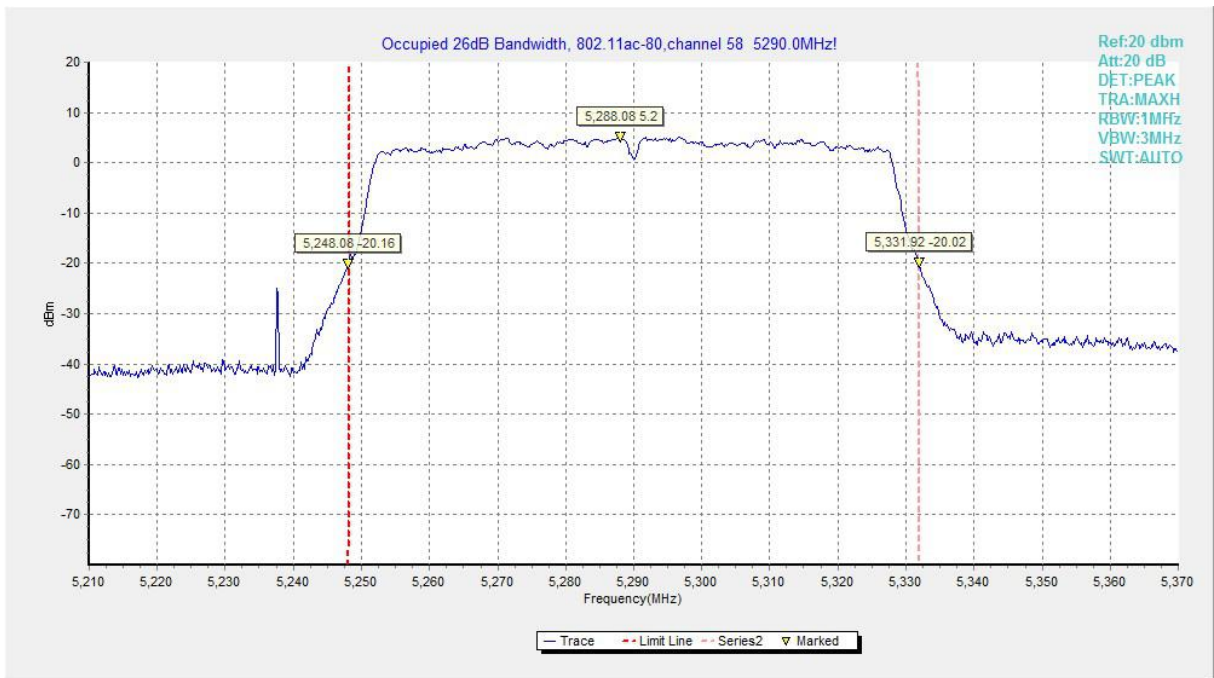


Fig.48 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

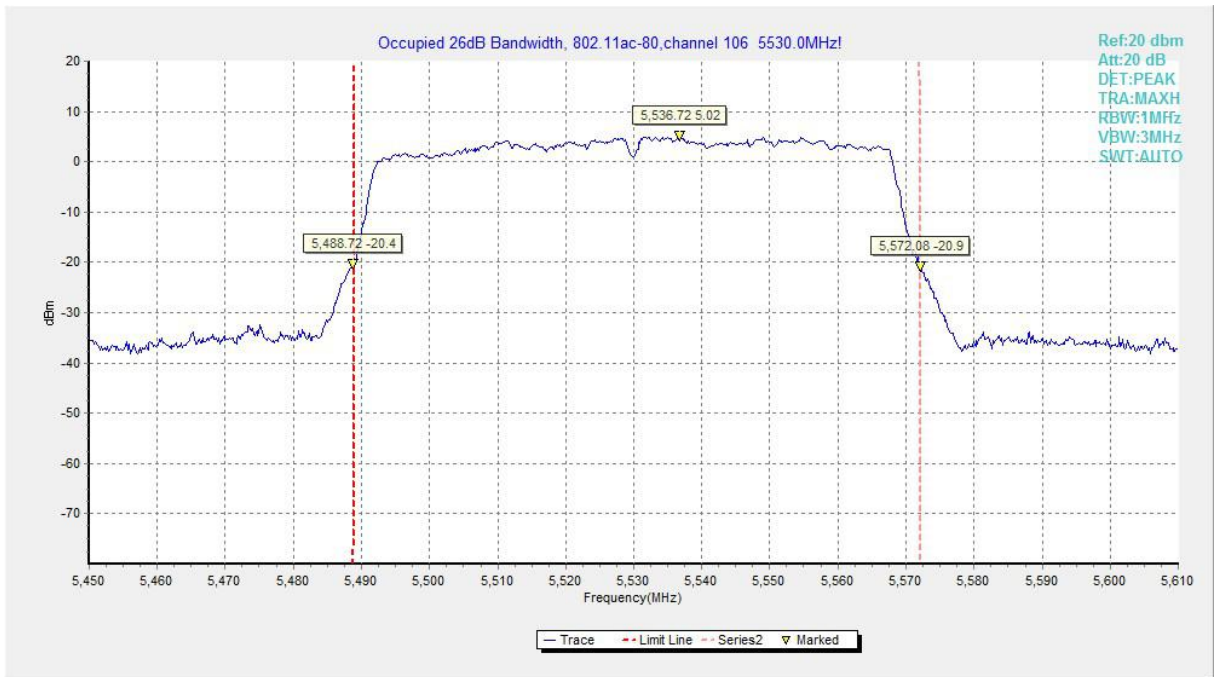


Fig.49 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

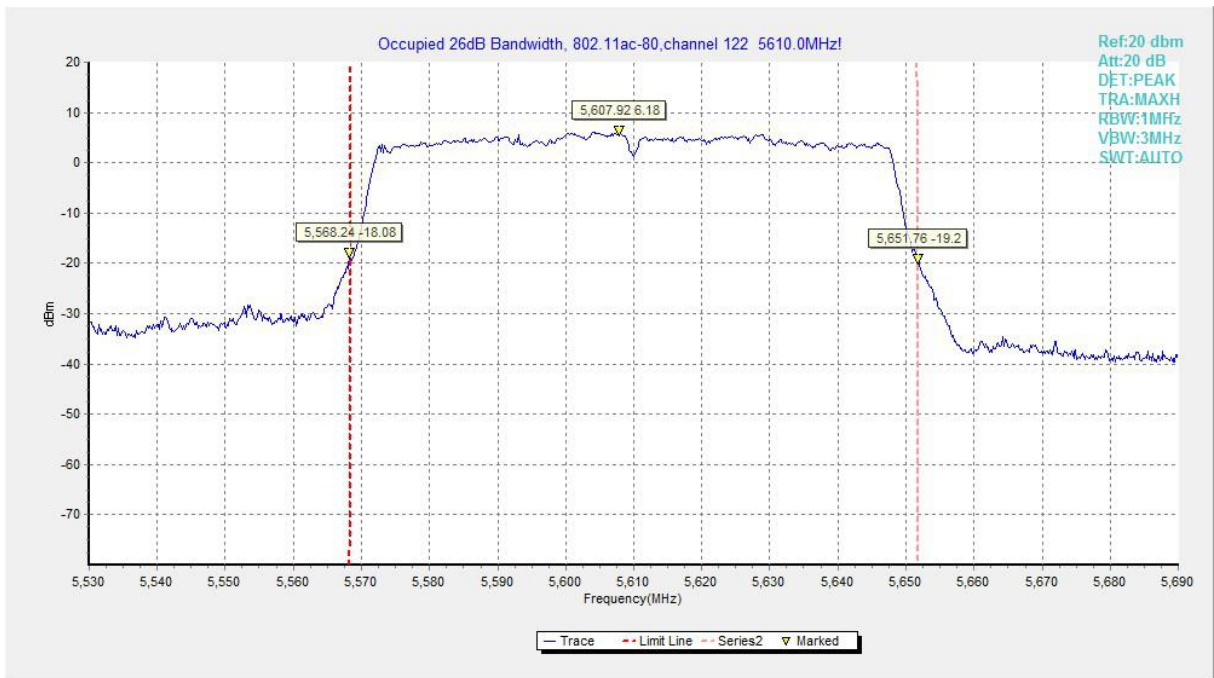


Fig.50 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

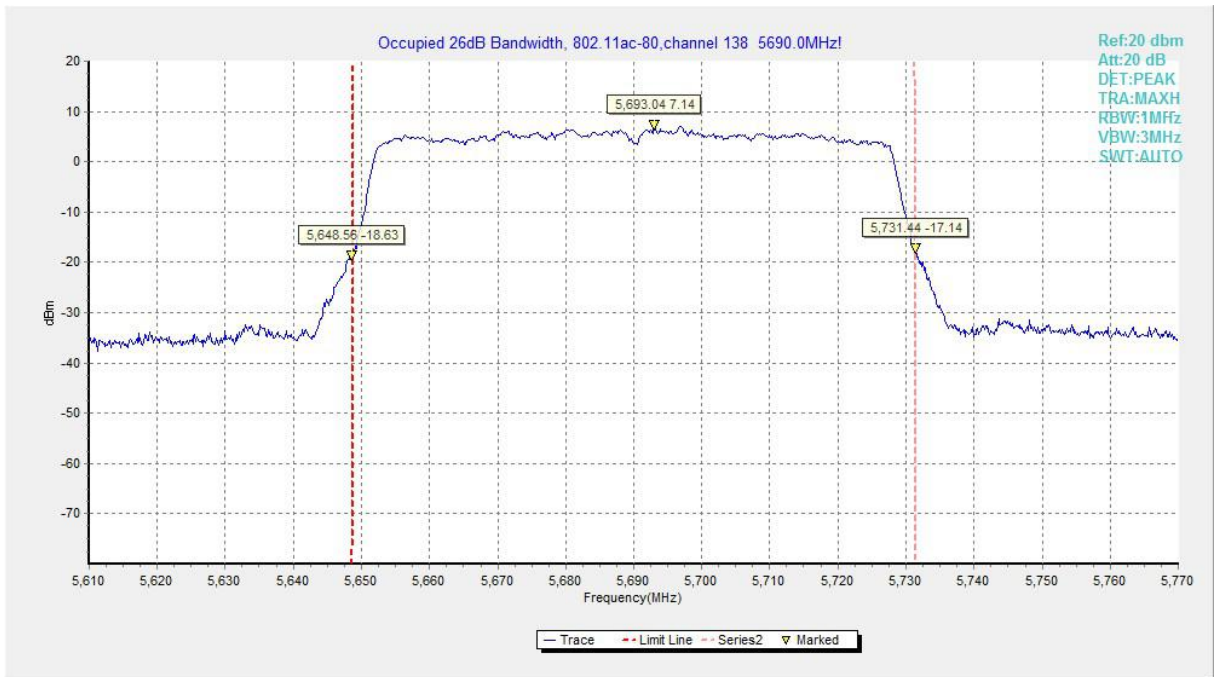


Fig.51 Occupied 26dB Bandwidth (802. 11ac-HT80, 5690MHz)

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
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.52	P
	5320 MHz	Fig.53	P
	5500 MHz	Fig.54	P
	5700 MHz	Fig.55	P
802.11n HT20	5180 MHz	Fig.56	P
	5320 MHz	Fig.57	P
	5500 MHz	Fig.58	P
	5700 MHz	Fig.59	P
802.11ac HT20	5180 MHz	Fig.60	P
	5320 MHz	Fig.61	P
	5500 MHz	Fig.62	P
	5700 MHz	Fig.63	P
802.11n HT40	5190 MHz	Fig.64	P
	5310 MHz	Fig.65	P
	5510 MHz	Fig.66	P
	5670 MHz	Fig.67	P
802.11ac HT40	5190 MHz	Fig.68	P
	5310 MHz	Fig.69	P
	5510 MHz	Fig.70	P
	5670 MHz	Fig.71	P
802.11ac HT80	5210MHz	Fig.72	P
	5290MHz	Fig.73	P
	5530MHz	Fig.74	P

Conclusion: PASS

Test graphs as below:

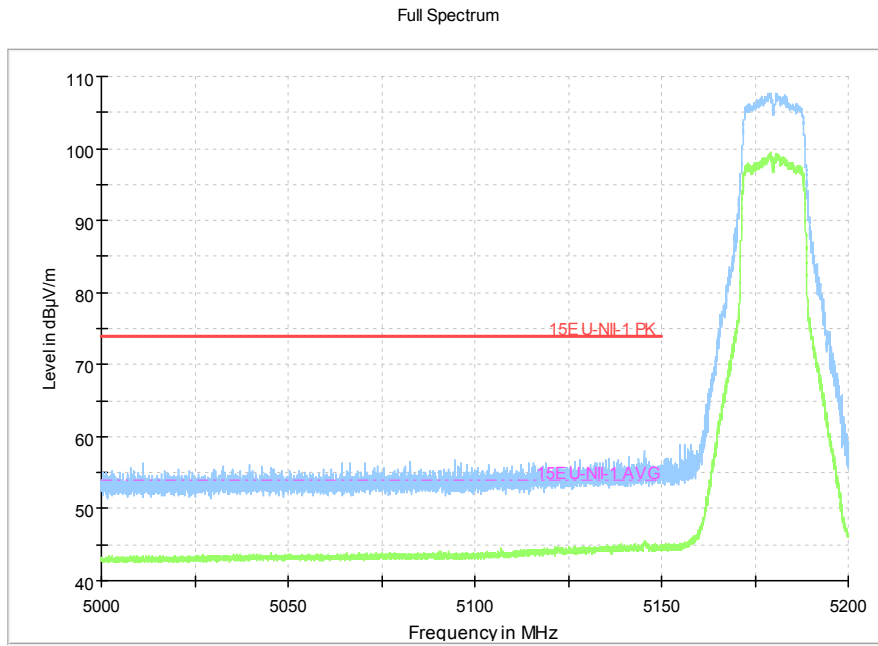


Fig.52 Band Edges (802.11a, 5180MHz)

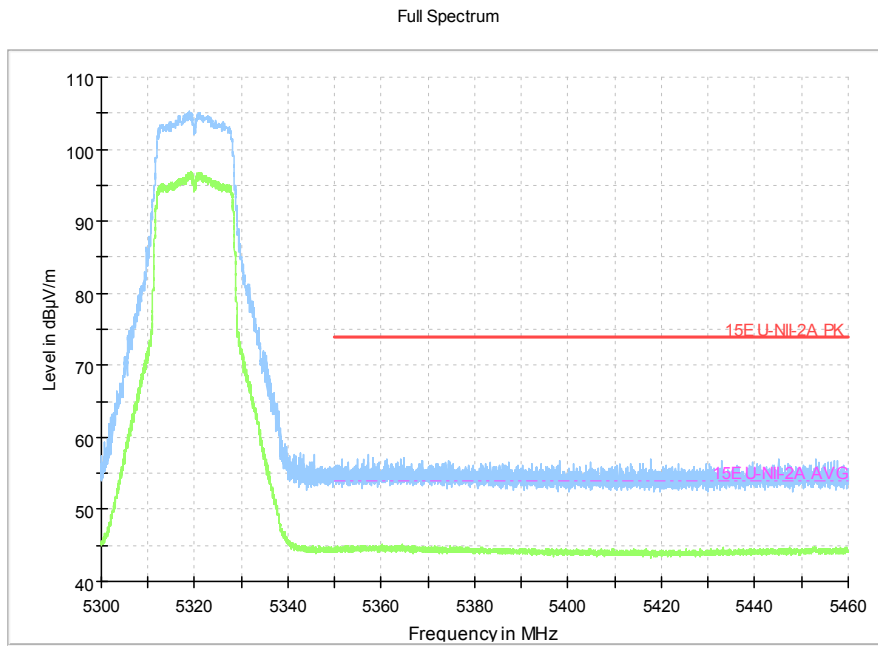


Fig.53 Band Edges (802.11a, 5320MHz)

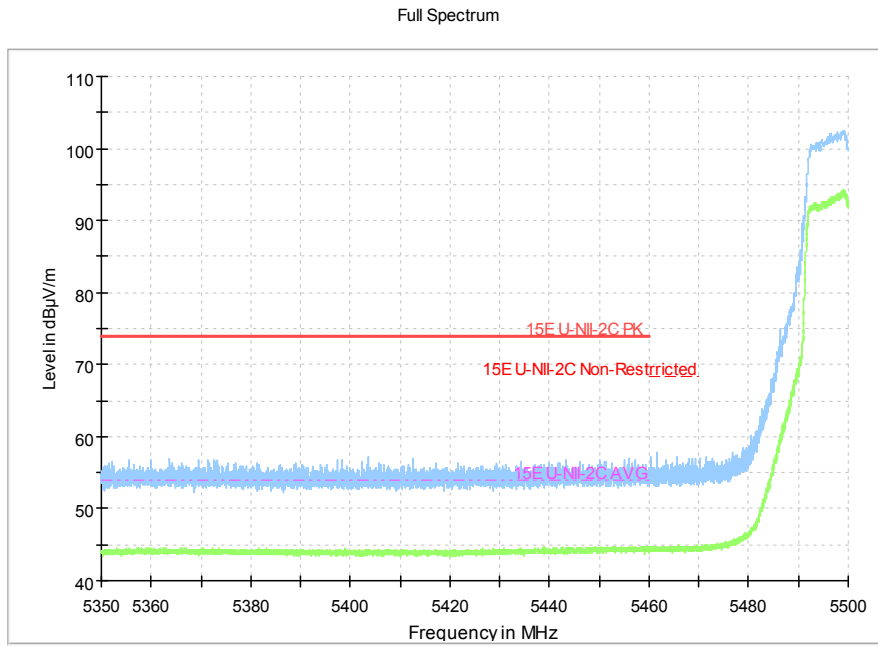


Fig.54 Band Edges (802.11a, 5500MHz)

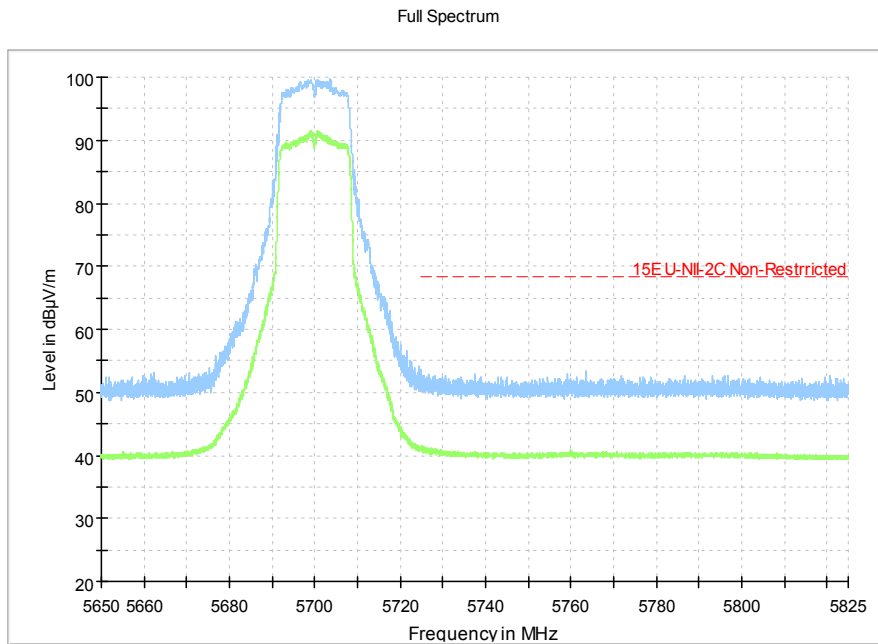


Fig.55 Band Edges (802.11a, 5700MHz)

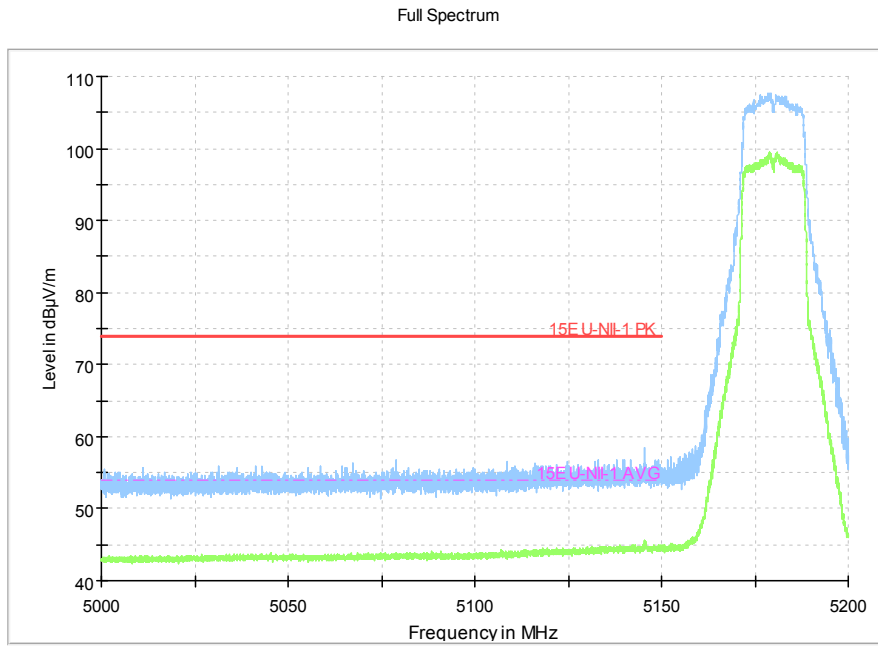


Fig.56 Band Edges (802.11n-HT20, 5180MHz)

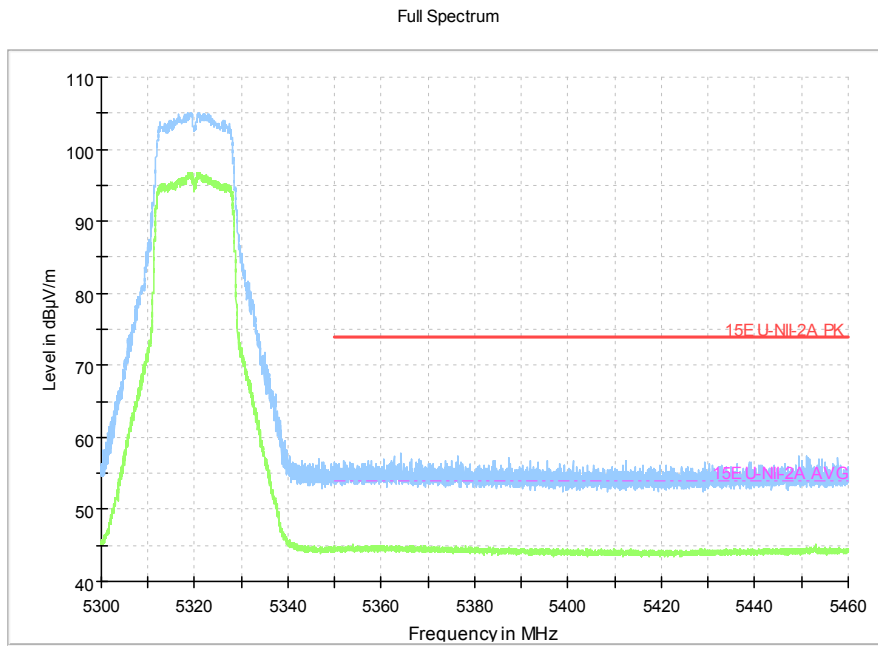


Fig.57 Band Edges (802.11n-HT20, 5320MHz)

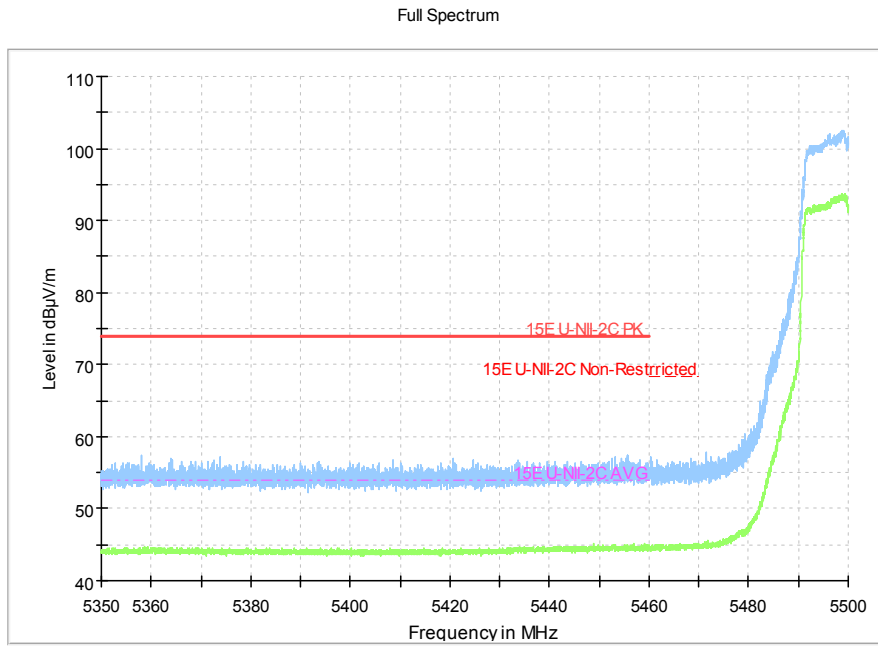


Fig.58 Band Edges (802.11n-HT20, 5500MHz)

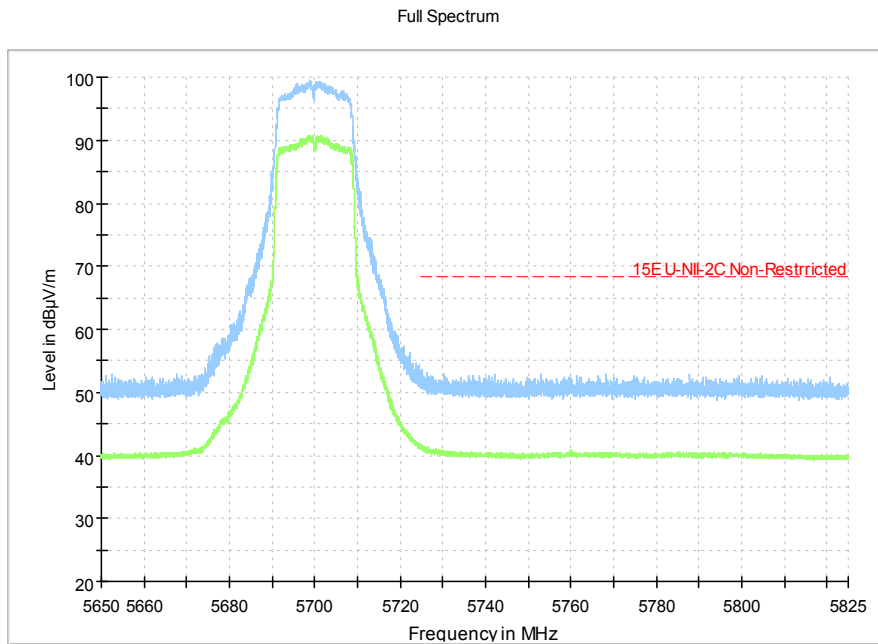


Fig.59 Band Edges (802.11n-HT20, 5700MHz)

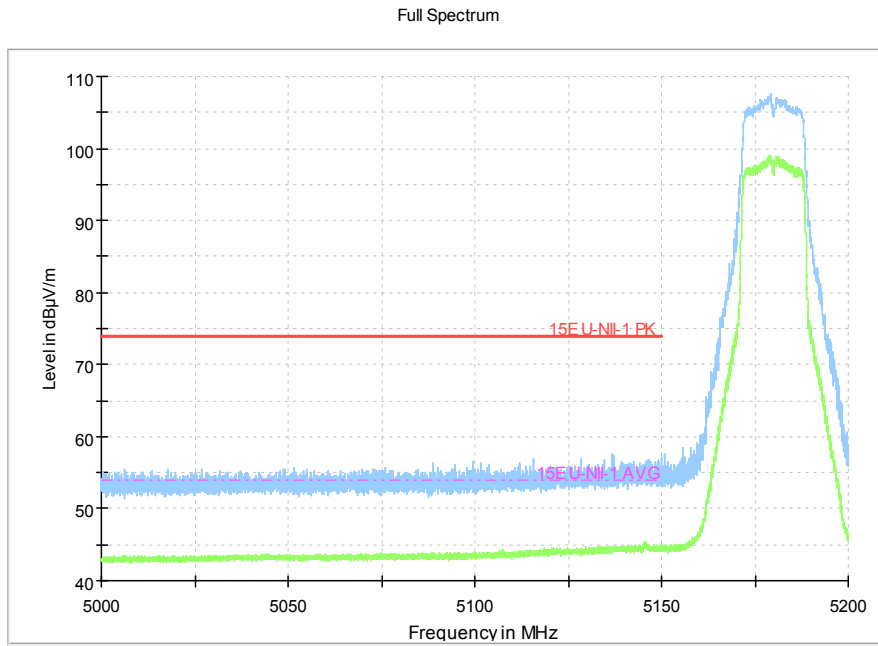


Fig.60 Band Edges (802.11ac-HT20, 5180MHz)

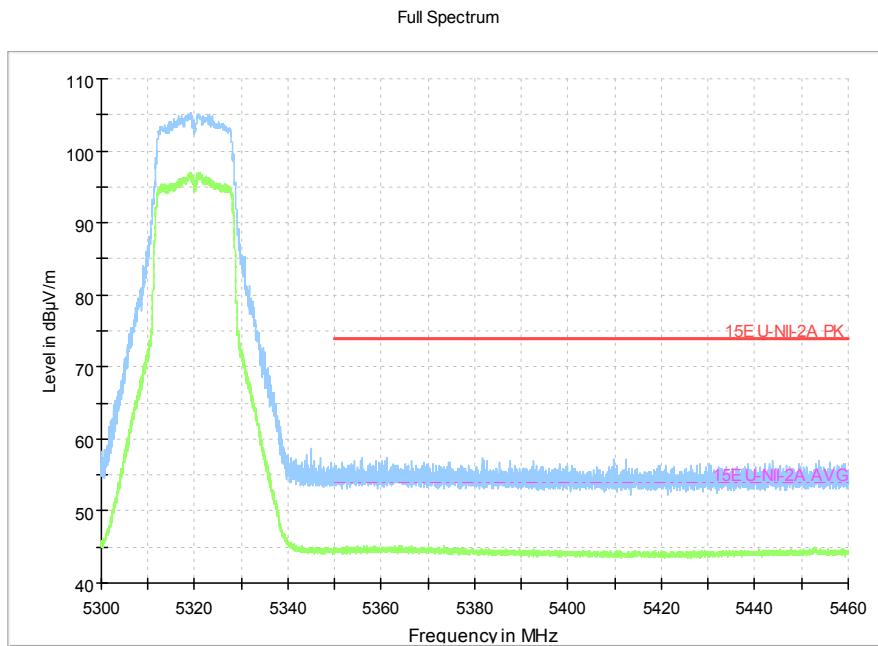


Fig.61 Band Edges (802.11ac-HT20, 5320MHz)