



FCC PART 15C TESTREPORT No. I16Z40348-SRD04

for

TCL Communication Ltd.

HSDPA/HSUPA/HSPA+/UMTS quad band / GSM quad band/LTE 3

band mobile phone

6071W

with

FCC ID: 2ACCJN009

Hardware Version: 01

Software Version: 01

Issued Date: 2016-5-30



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.

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1. TEST LATORATORY

1.1. Testing Location

Location 1:CTTL(huayuan North Road)

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

Location 2:CTTL(Shouxiang)

Address: No. 51 Shouxiang Science Building, Xueyuan Road,
Haidian District, Beijing, P. R. China100191

Location 3:CTTL(Yuetan)

Address: No. 11 Yue Tan Nan Jie, Xicheng District, Beijing, P. R.
China100045

Location 4:CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology
Development Area, Beijing, P. R. China 100176

Location 5:CTTL(South Branch)

Address: No.12, ShangSha Innovation and Technology Park,
Futian District, Shenzhen, Guangdong, P. R.
China518048

1.2. Testing Environment

Normal Temperature: 15-35℃
Extreme Temperature: -10/+55℃
Relative Humidity: 20-75%

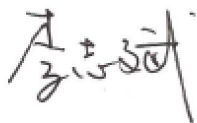
1.3. Project data

Testing Start Date: 2016-3-28
Testing End Date: 2016-5-30

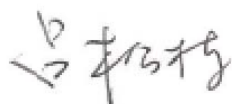
1.4. Signature



Xu Zhongfei
(Prepared this test report)



Li Zhibin
(Reviewed this test report)



Lv Songdong
(Approved this test report)



2. CLIENT INFORMATION

2.1. Applicant Information

Company Name: TCL Communication Ltd.
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City: Shanghai
Postal Code: 201203
Country: China
Telephone: 0086-21-31363544
Fax: 0086-21-61460602

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
Address: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,
Pudong Area Shanghai, P.R. China. 201203
City: Shanghai
Postal Code: 201203
Country: China
Telephone: 0086-21-31363544
Fax: 0086-21-61460602

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY

EQUIPMENT(AE)

3.1. About EUT

Description	HSDPA/HSUPA/HSPA+/UMTS quad band / GSM quad band/LTE 3 band mobile phone
Model name	6071W
FCC ID	2ACCJN009
Number of Channels	CH36 38 40 42 44 46 48 52 54 56 58 60 62 64 100 102 104 106 108 110 112 116 132 134 136 138 140 142 144
WLAN Frequency Range	ISM Bands: -5150MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Voltage	3.8V DC by Battery

Note: Photographs of EUT are shown in ANNEX C of this test report. Components list, please refer to documents of the manufacturer.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
ut01a	014636000002928	01	01
ut02a	0146360000057161	01	01

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	CAC3000013C2

AE1

Commercial name	Battery
Type	TLp030F2
Manufacturer	SCUD
Length of cable	/

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

3.4. General Description

The Equipment under Test (EUT) is a model of HSDPA/HSUPA/HSPA+/UMTS quad band / GSM quad band/LTE 3 band mobile phone with integrated antenna and inbuilt battery.

It has Bluetooth (EDR) function.

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

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	2015
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	2014
UNII: KDB 789033	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E	2014-06

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
Power Spectral Density	15.407	/	P
Occupied 26dB Bandwidth	15.403	/	P
Band edge compliance	15.209	/	P
99% Occupied bandwidth	15.407	/	P
Transmitter spurious emissions radiated	15.407	/	P
Spurious emissions radiated < 30 MHz	15.407	/	P
Spurious emissions conducted < 30 MHz	15.407	/	P
Peak Excursion	15.407	/	P
Frequency Stability	15.407	/	NA
Transmit Power Control	15.407	/	NA

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

Terms used in Verdict column

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

6.2. Statements

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

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

6.3. Test Conditions

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

Temperature	26°C
Voltage	3.8V
Humidity	44%

7. TEST EQUIPMENTS UTILIZED

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	2015-07-08	2016-07-07
2	Test Receiver	ESS	847151/015	Rohde & Schwarz	2015-11-29	2016-11-28
3	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	2016-4-15	2017-4-14
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

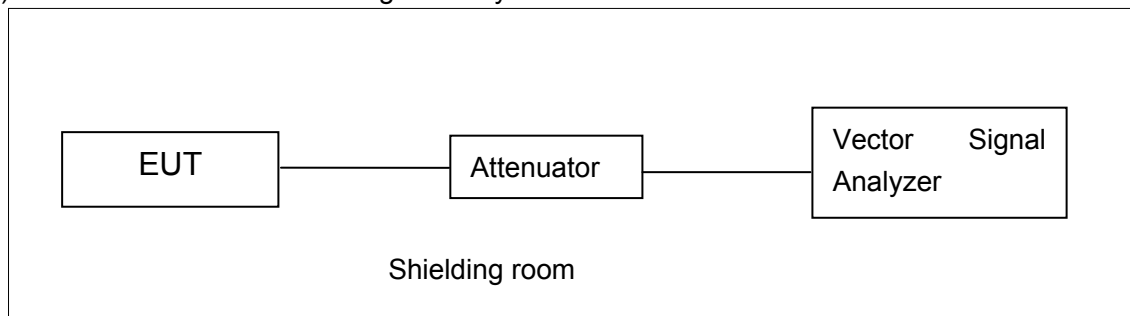
No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	2015-11-6	2016-11-5
2	BiLog Antenna	VULB9163	9163-514	Schwarzbeck	2011-11-11	2016-11-10
3	Dual-Ridge Waveguide Horn Antenna	3117	00119024	ETS-Lindgren	2015-4-20	2017-4-19
4	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2012-7-1	2016-06-30
5	Loop antenna	HFH2-Z2	829324/007	Rohde & Schwarz	2011-12-21	2016-12-20
6	Semi-anechoic chamber	/	CT000332-1074	Frankonia German	/	/

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

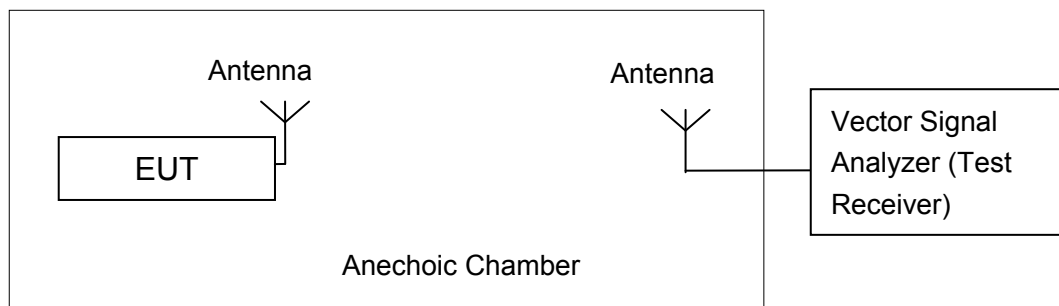


A.1.2. Radiated Emission Measurements

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-1 is made according to KDB 789033

Measurement Results:

802.11a mode

Mode	Channel	Test Result (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
802.11a	5180MHz (Ch36)	19.38	/	/	/	/	/	/	/
	5200MHz (Ch40)	19.47	/	/	/	/	/	/	/
	5240MHz(Ch48)	19.90	/	/	/	/	/	/	/
	5260MHz(Ch52)	19.79	/	/	/	/	/	/	/
	5280MHz(Ch56)	19.84	/	/	/	/	/	/	/
	5320MHz(Ch64)	19.82	/	/	/	/	/	/	/
	5500MHz(Ch100)	19.94	/	/	/	/	/	/	/
	5580MHz(Ch116)	19.98	19.86	19.77	19.75	19.55	19.34	19.15	19.00
	5700MHz(Ch140)	18.84	/	/	/	/	/	/	/

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

802.11n-HT20 mode

Mode	Channel	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT20)	5180MHz (Ch36)	19.13	/	/	/	/	/	/	/
	5200MHz (Ch40)	19.24	/	/	/	/	/	/	/
	5240MHz(Ch48)	19.67	/	/	/	/	/	/	/
	5260MHz(Ch52)	19.56	/	/	/	/	/	/	/
	5280MHz(Ch56)	19.60	/	/	/	/	/	/	/
	5320MHz(Ch64)	19.62	/	/	/	/	/	/	/
	5500MHz(Ch100)	19.78	/	/	/	/	/	/	/
	5580MHz(Ch116)	19.82	19.50	19.54	19.66	19.40	19.16	19.05	18.94
	5700MHz(Ch140)	18.68	/	/	/	/	/	/	/

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

802.11n-HT40 mode

Mode	Channel	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n (HT40)	5190MHz (Ch38)	18.82	/	/	/	/	/	/	/
	5230MHz(Ch46)	19.21	18.92	18.60	18.28	17.91	17.55	17.48	17.28
	5270MHz(Ch54)	19.08	/	/	/	/	/	/	/
	5310MHz(Ch62)	19.16	/	/	/	/	/	/	/
	5510MHz(Ch102)	19.14	/	/	/	/	/	/	/
	5550MHz(Ch110)	19.21	/	/	/	/	/	/	/
	5670MHz(Ch134)	18.60	/	/	/	/	/	/	/

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

802.11ac-HT80 mode

Mode	Channel	Test Result (dBm)							
		Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11ac (HT80)	5210MHz(Ch42)	17.38	16.91	16.50	16.36	15.86	15.52	15.37	15.28
	5290MHz(Ch58)	17.40	/	/	/	/	/	/	/
	5530MHz(Ch106)	17.61	/	/	/	/	/	/	/
	5610MHz(Ch122)	17.54	/	/	/	/	/	/	/

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 SA-1 is made according to KDB 789033

Measurement Results:

Mode	Channel	Power Spectral Density (dBm/MHz)	Conclusion
802.11a	5180 MHz	1.56	P
	5200 MHz	1.23	P
	5240 MHz	1.60	P
	5260 MHz	1.55	P
	5280 MHz	1.62	P
	5320 MHz	1.74	P
	5500 MHz	3.03	P
	5580 MHz	3.12	P
	5700 MHz	3.66	P
802.11n HT20	5180 MHz	-0.50	P
	5200 MHz	-0.84	P
	5240 MHz	-0.48	P
	5260 MHz	-0.56	P
	5280 MHz	-0.36	P
	5320 MHz	-0.23	P
	5500 MHz	0.70	P
	5580 MHz	1.09	P
	5700 MHz	2.07	P
802.11n HT40	5190 MHz	-3.58	P
	5230 MHz	-3.44	P
	5270 MHz	-3.54	P
	5310 MHz	-3.36	P
	5510 MHz	-1.87	P
	5550 MHz	-2.02	P
	5670 MHz	-1.62	P
802.11ac HT80	5210MHz	-7.25	P
	5290MHz	-7.25	P
	5530MHz	-5.48	P
	5610MHz	-5.62	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
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Measurement Result:

Mode	Channel	Occupied 26dB Bandwidth (kHz)		conclusion
802.11a	5180 MHz	Fig.1	20950	P
	5200 MHz	Fig.2	20950	P
	5240 MHz	Fig.3	20850	P
	5260 MHz	Fig.4	21000	P
	5280 MHz	Fig.5	20900	P
	5320 MHz	Fig.6	20850	P
	5500 MHz	Fig.7	20799	P
	5580 MHz	Fig.8	20900	P
	5700 MHz	Fig.9	20850	P
802.11n HT20	5180 MHz	Fig.10	21790	P
	5200 MHz	Fig.11	21750	P
	5240 MHz	Fig.12	21700	P
	5260 MHz	Fig.13	21900	P
	5280 MHz	Fig.14	21790	P
	5320 MHz	Fig.15	21850	P
	5500 MHz	Fig.16	21950	P
	5580 MHz	Fig.17	21850	P
	5700 MHz	Fig.18	21850	P
802.11n HT40	5190 MHz	Fig.19	42950	P
	5230 MHz	Fig.20	42480	P
	5270 MHz	Fig.21	41910	P
	5310 MHz	Fig.22	42000	P
	5510 MHz	Fig.23	44400	P
	5550 MHz	Fig.24	41680	P
	5670 MHz	Fig.25	44880	P
802.11ac HT80	5210MHz	Fig.26	83830	P
	5290MHz	Fig.27	82230	P
	5530MHz	Fig.28	84000	P
	5610MHz	Fig.29	84320	P

Conclusion: PASS

Test graphs as below:

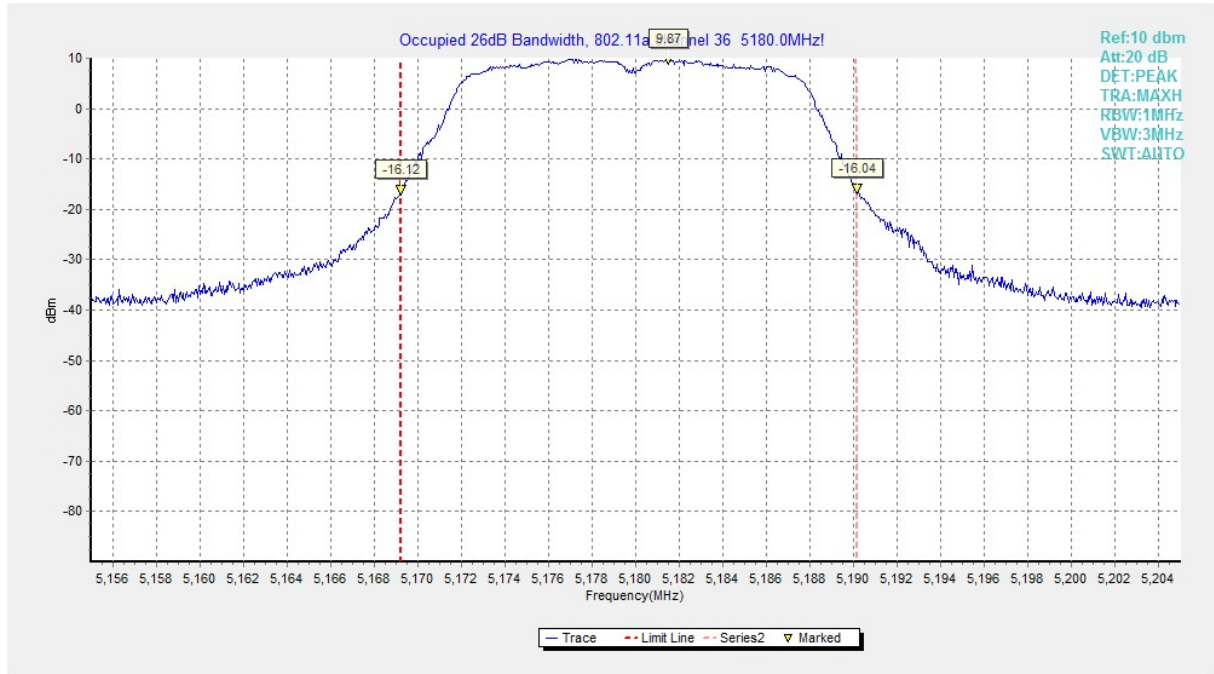


Fig. 1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

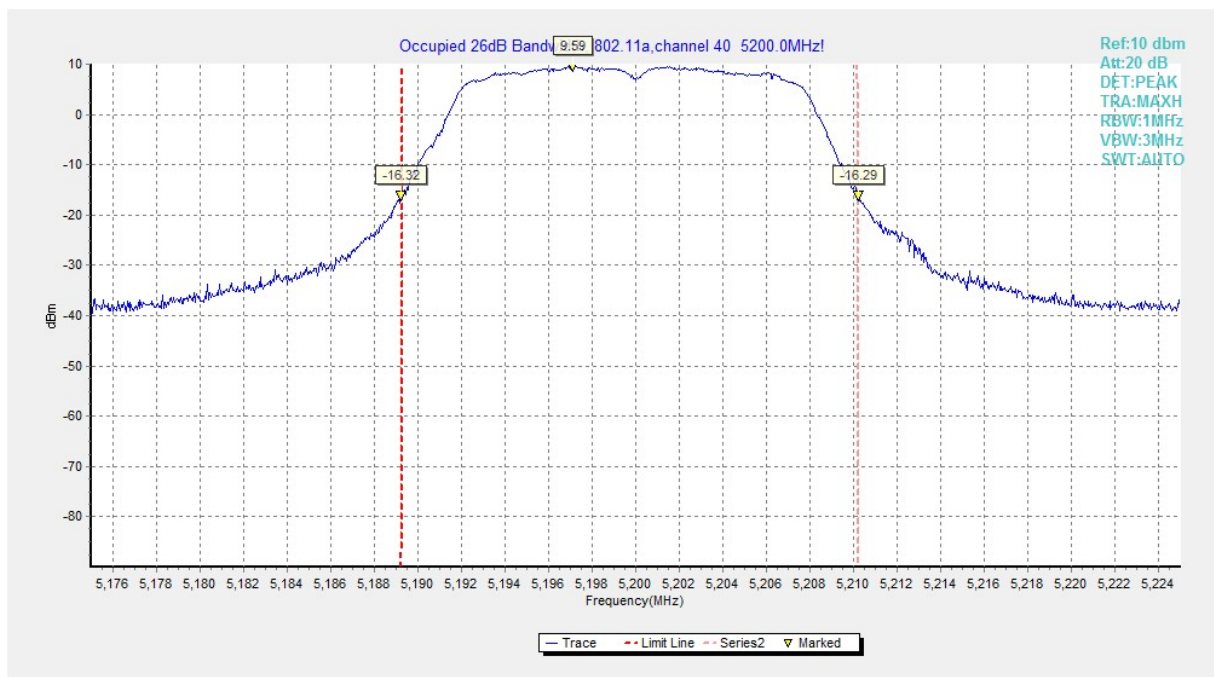


Fig. 2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

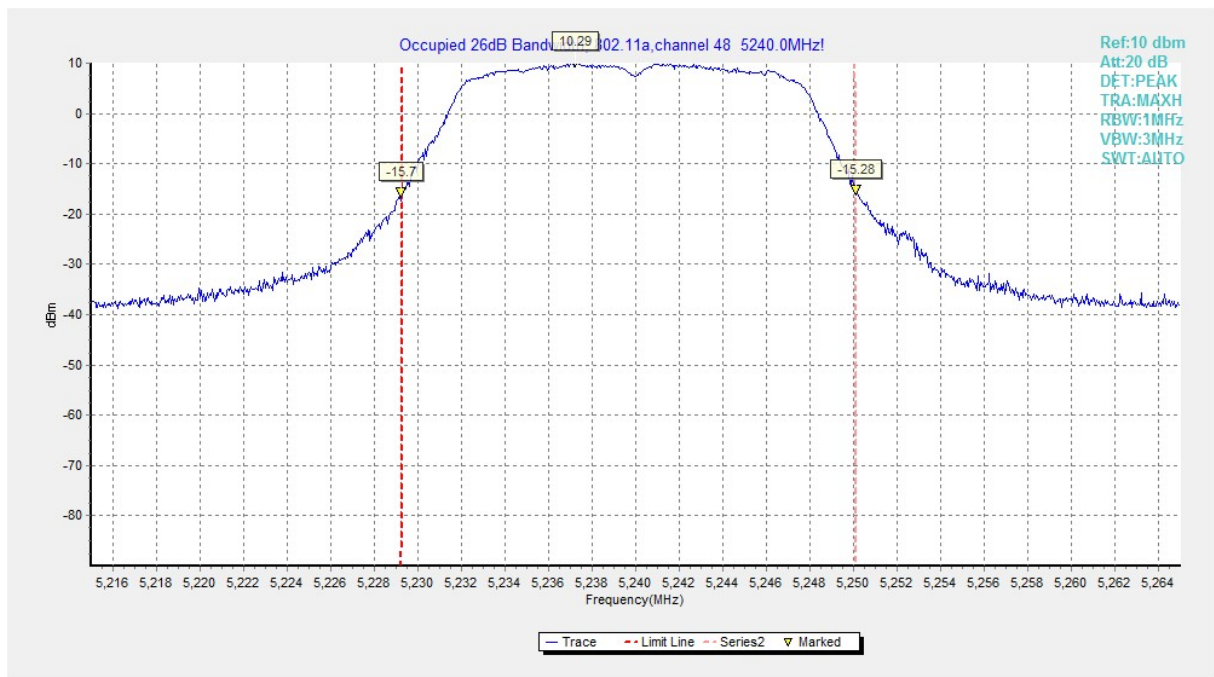


Fig. 3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

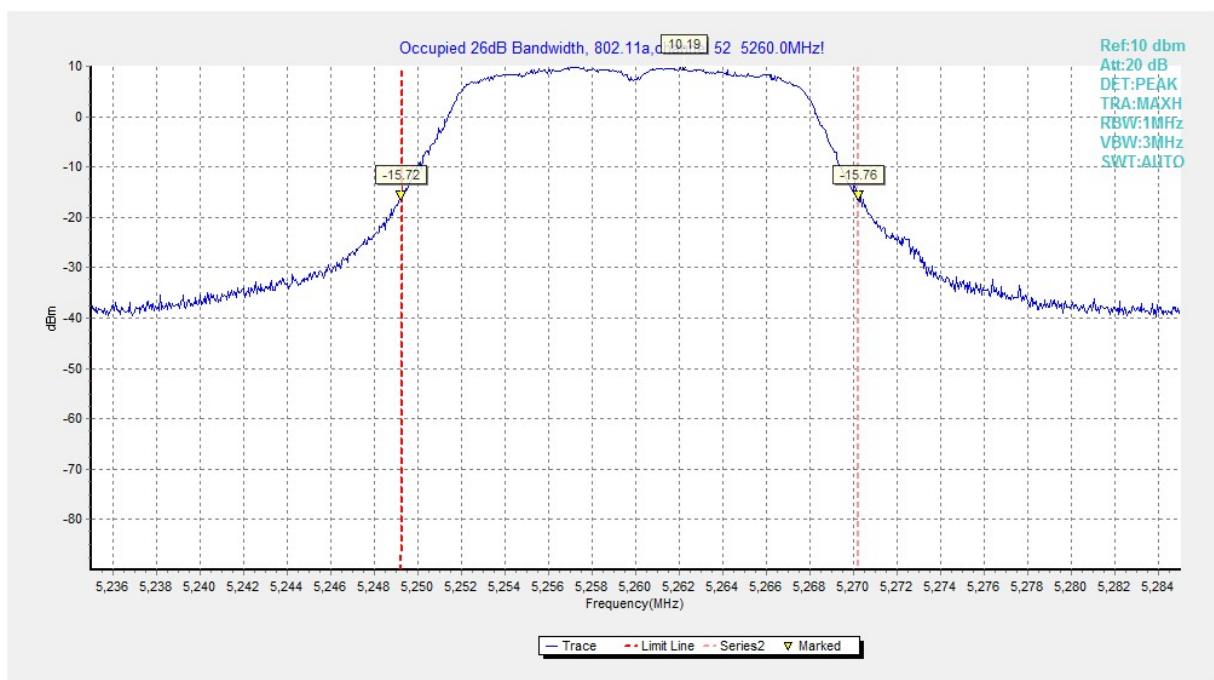


Fig. 4 Occupied 26dB Bandwidth (802.11a, 5260MHz)

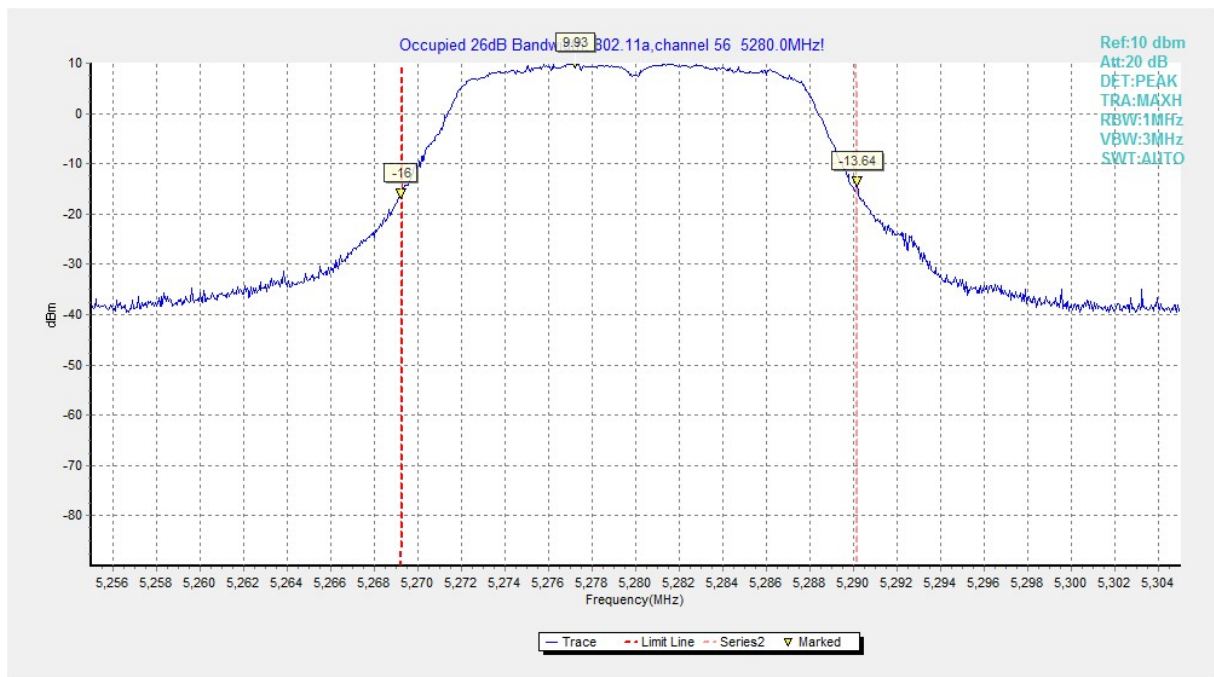


Fig. 5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

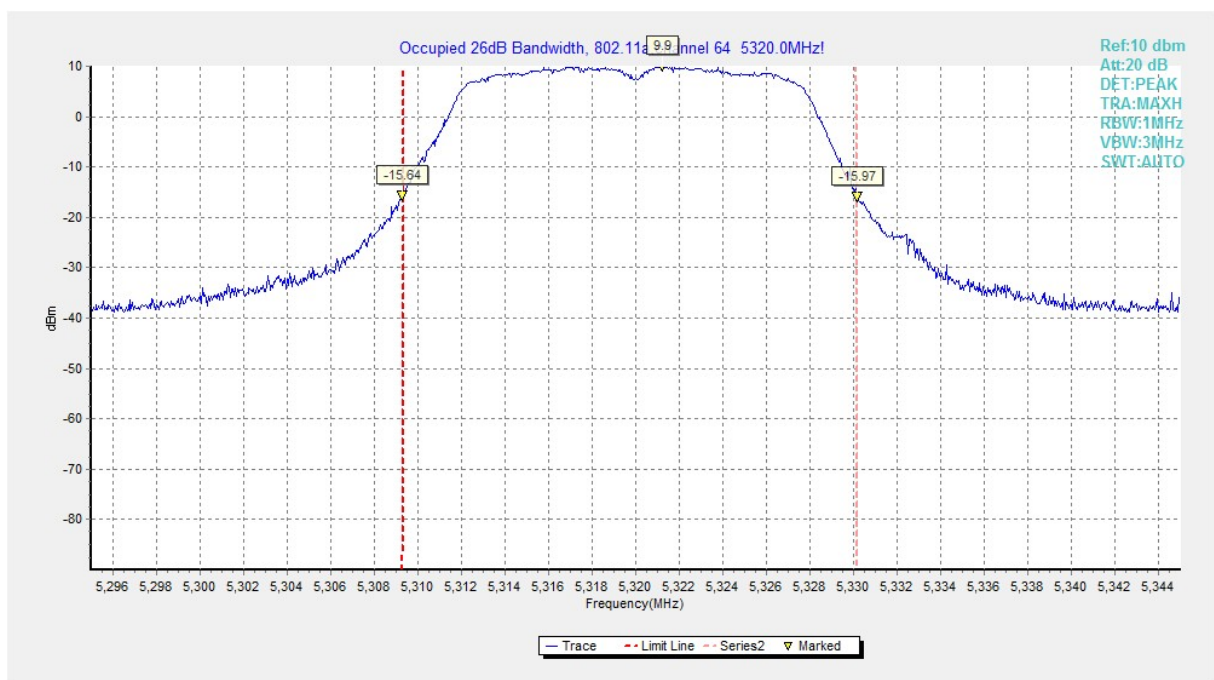


Fig. 6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

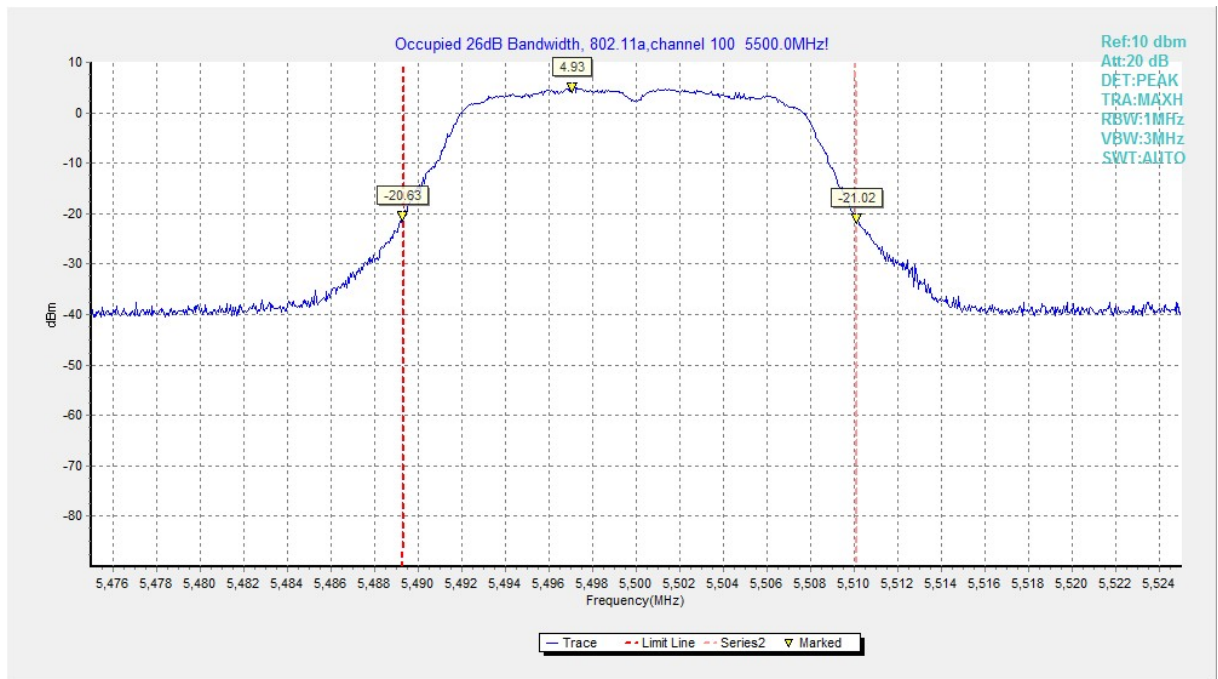


Fig. 7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

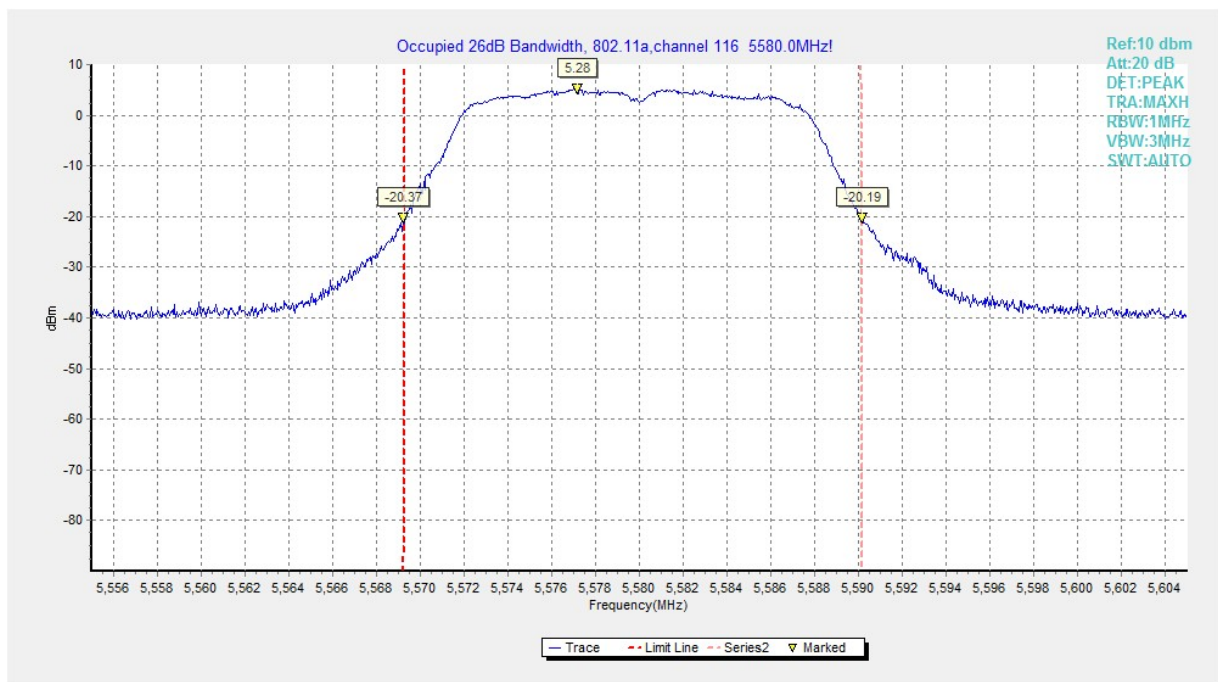


Fig. 8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

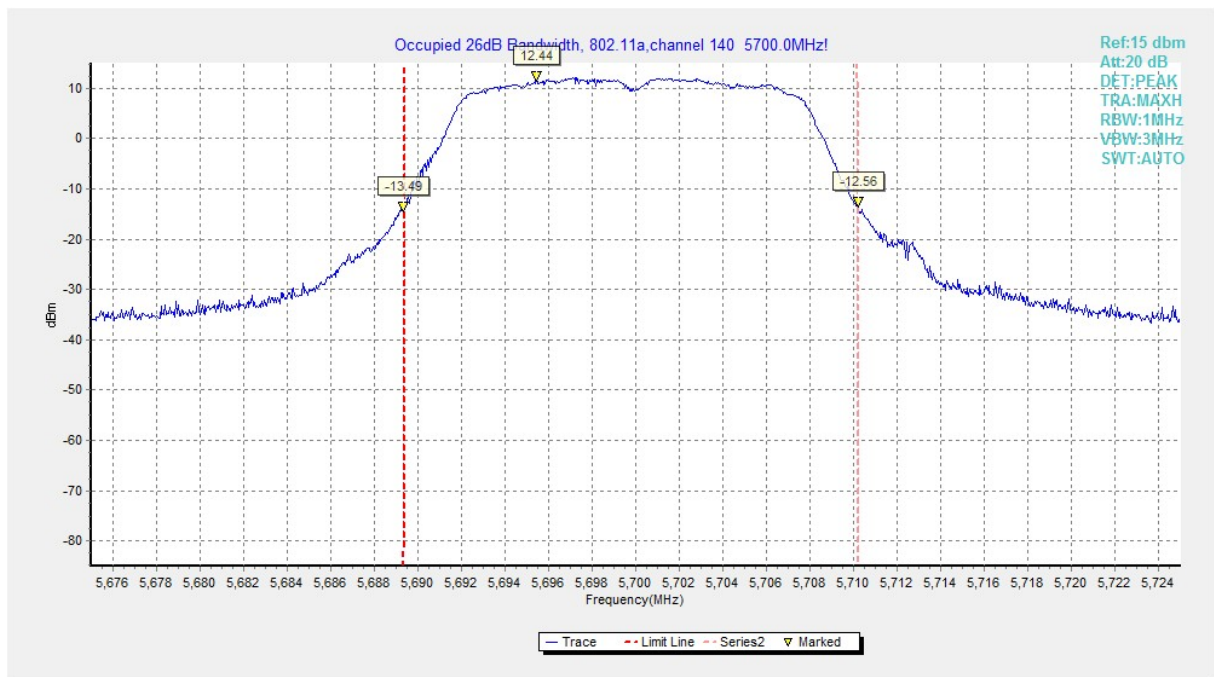


Fig. 9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

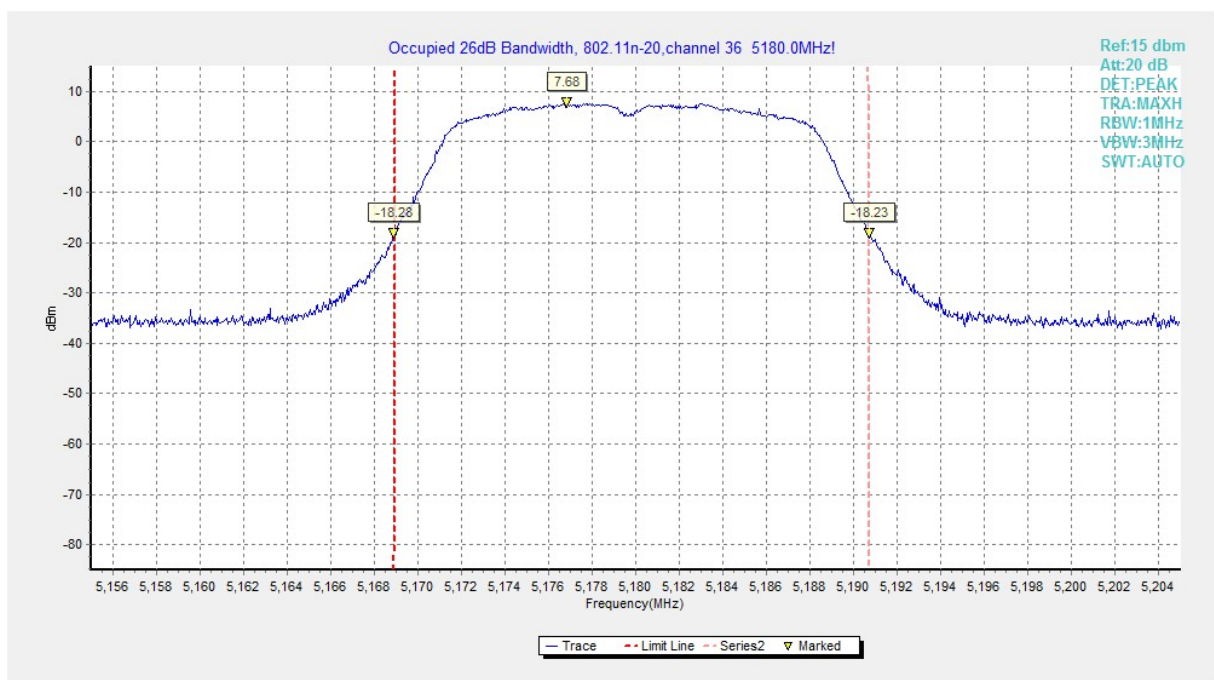


Fig. 10 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

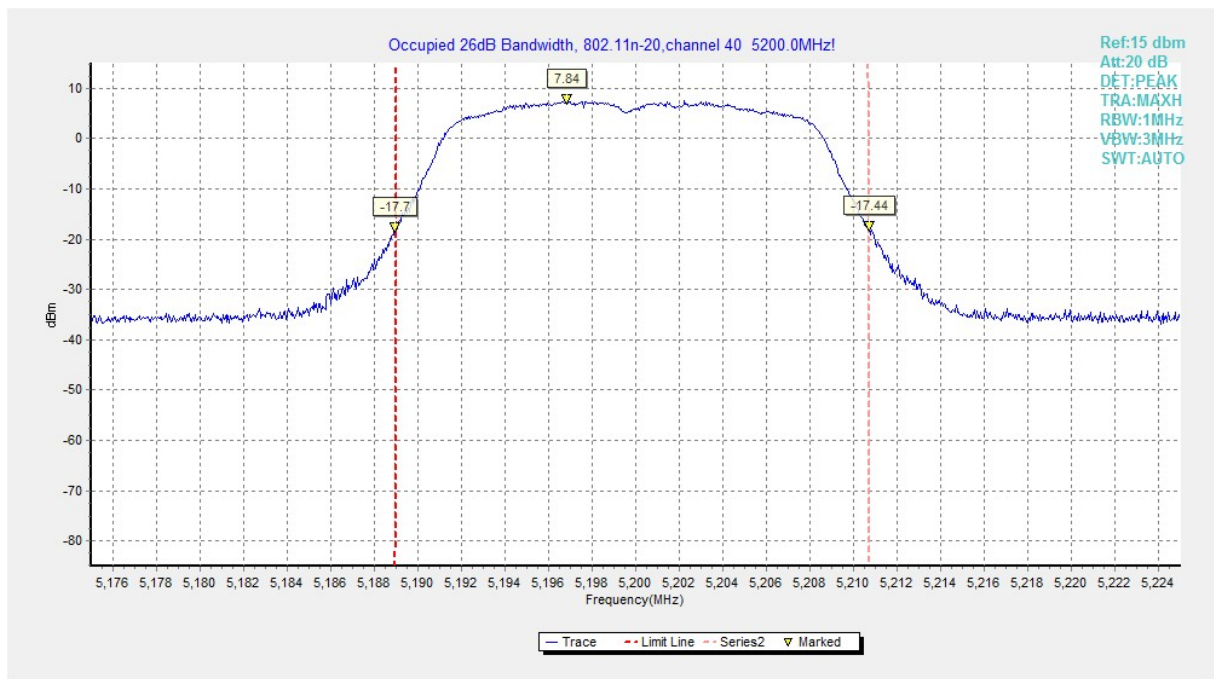


Fig. 11 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

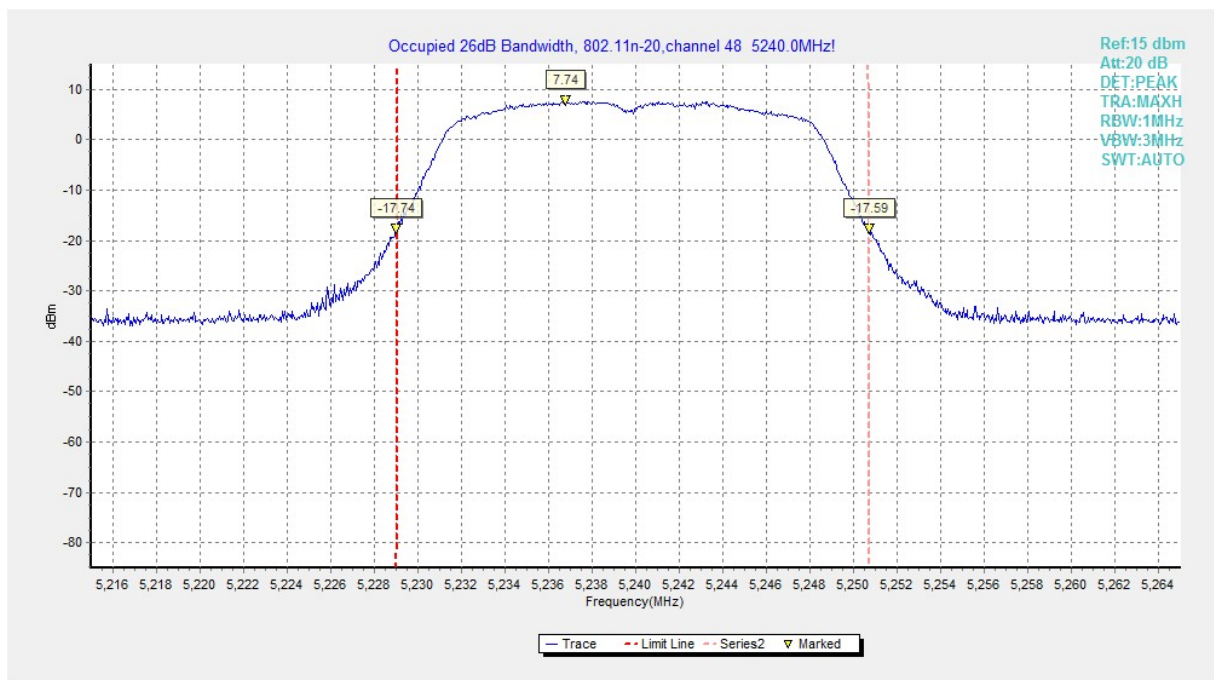


Fig. 12 Occupied 26dB Bandwidth (802.11n-HT20, 5240MHz)

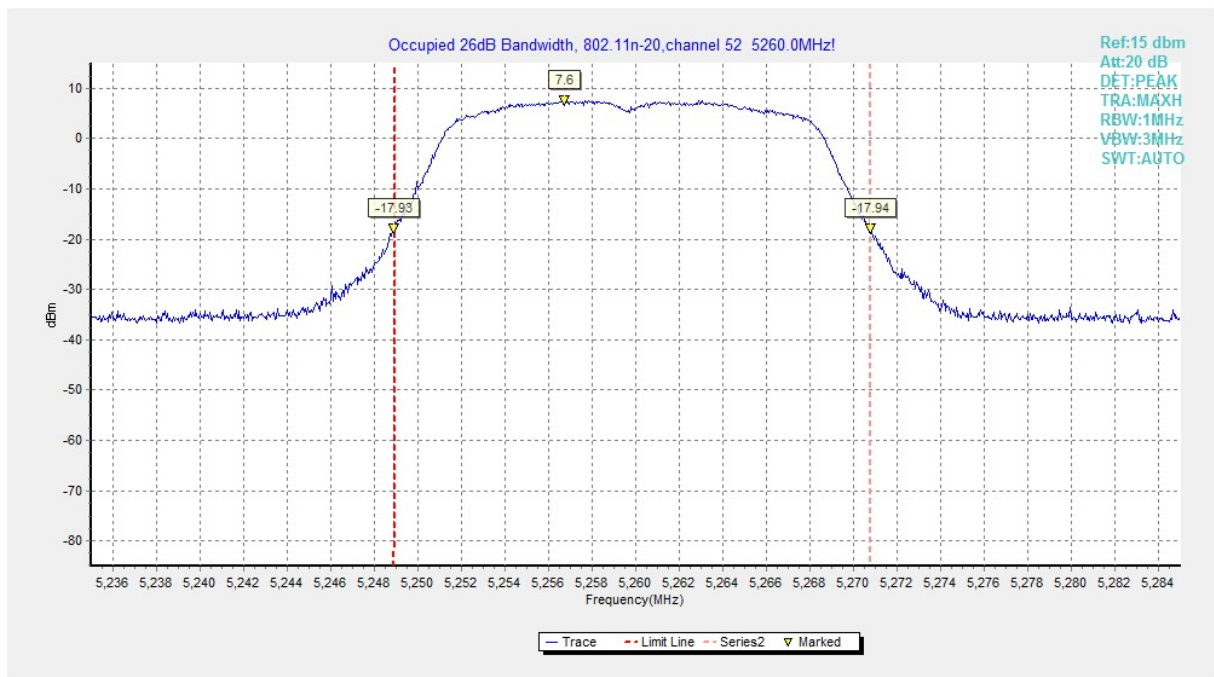


Fig. 13 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

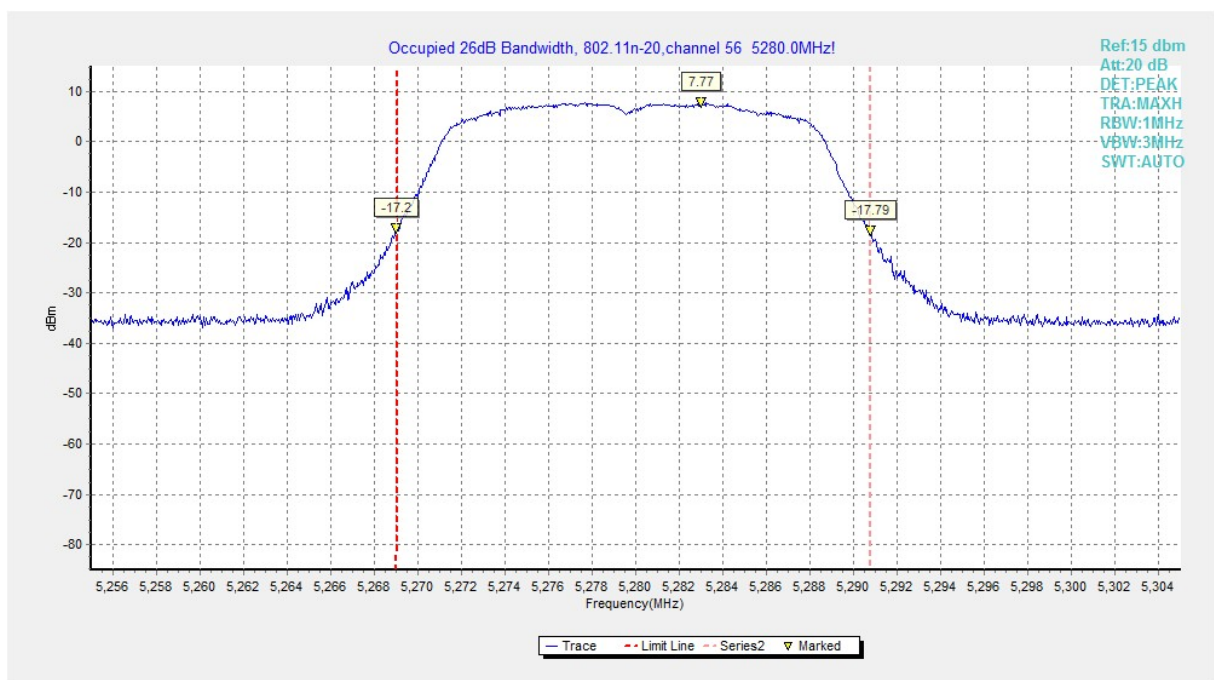


Fig. 14 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

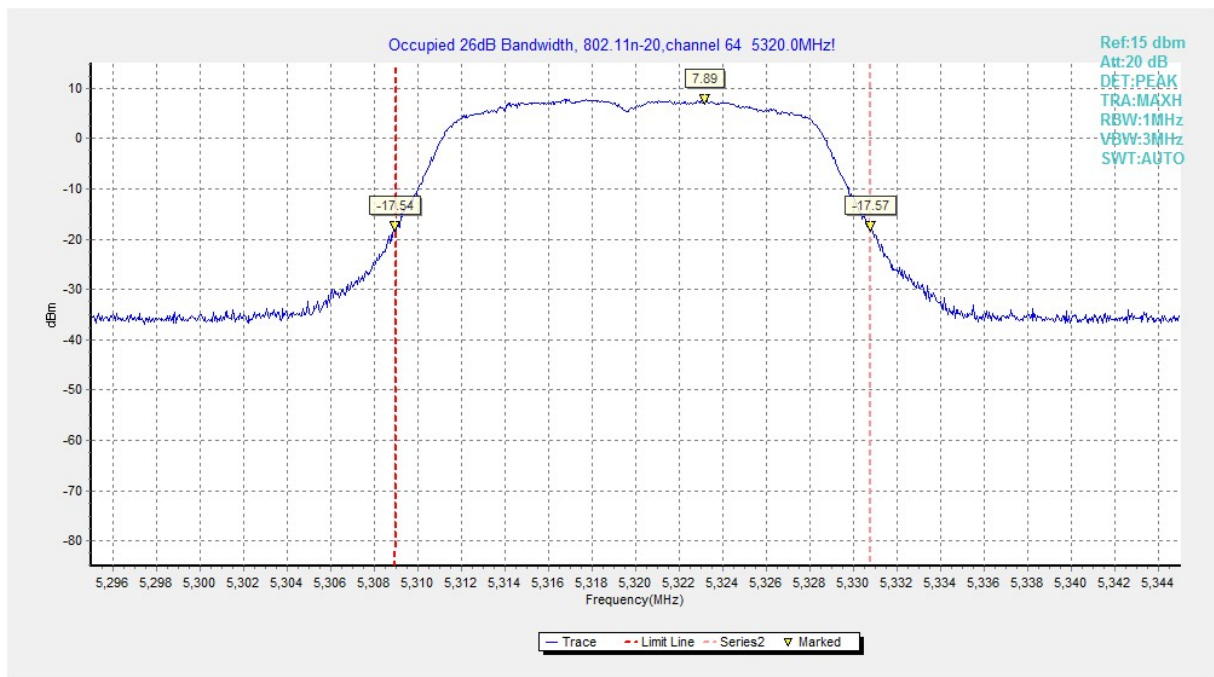


Fig. 15 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

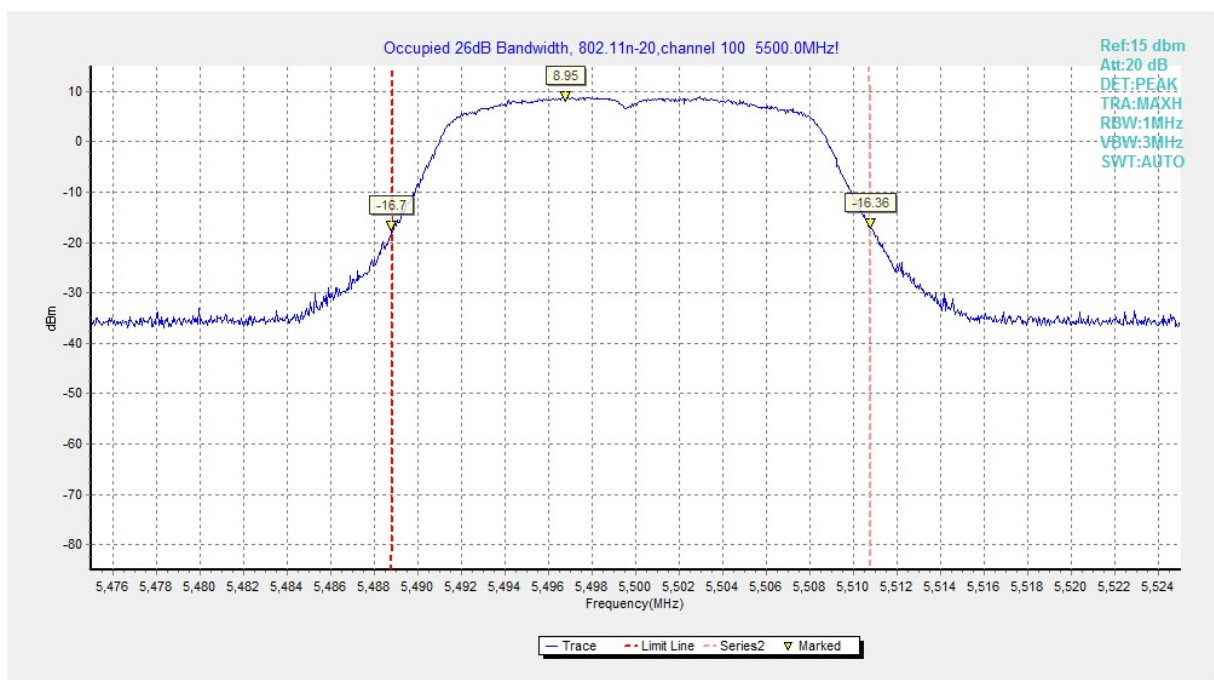


Fig. 16 Occupied 26dB Bandwidth (802. 11n-HT20, 5500MHz)

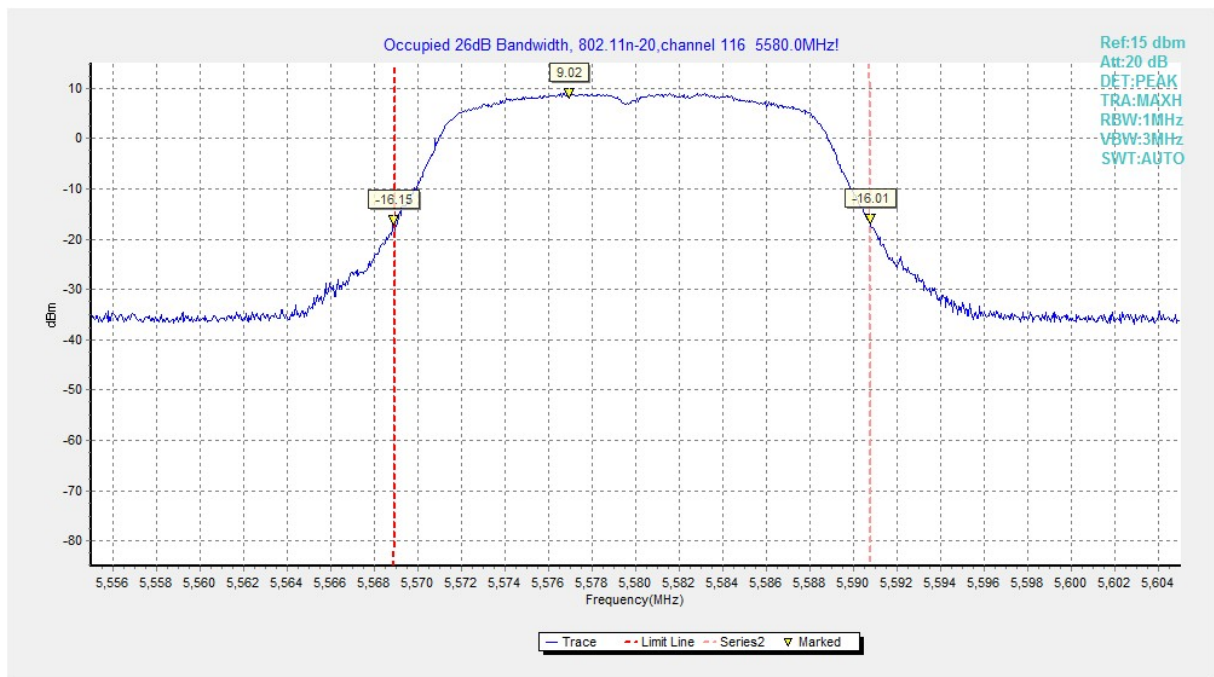


Fig. 17 Occupied 26dB Bandwidth (802. 11n-HT20, 5580MHz)

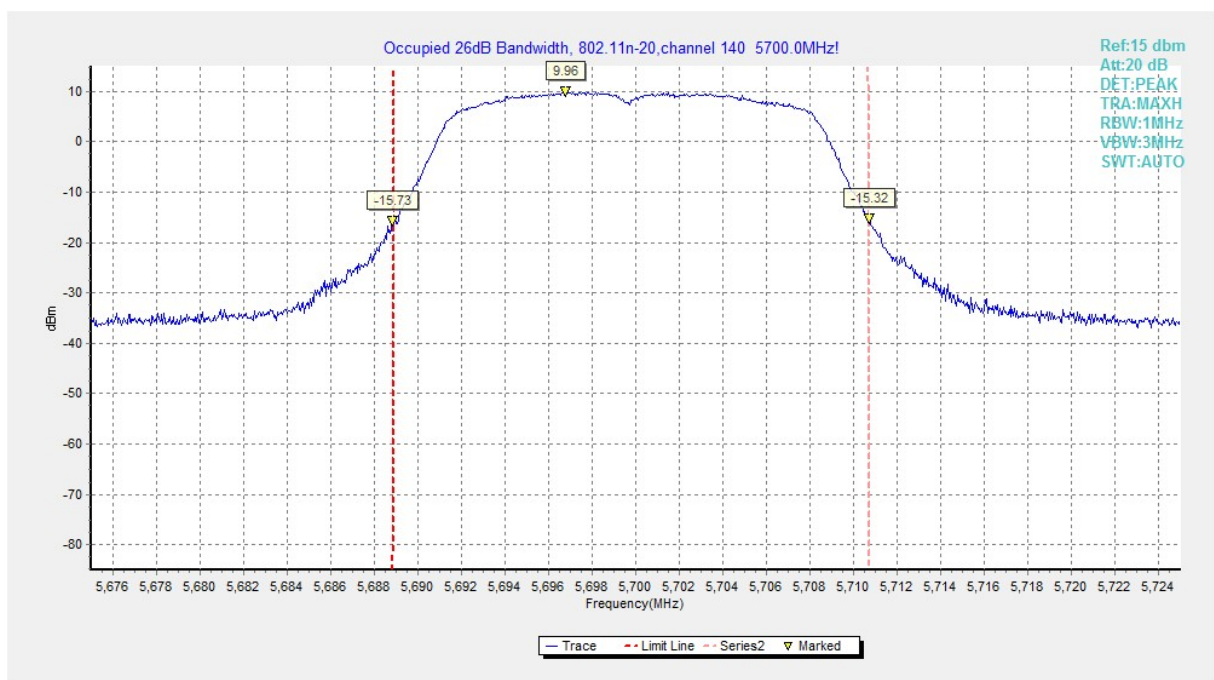


Fig. 18 Occupied 26dB Bandwidth (802. 11n-HT20, 5700MHz)

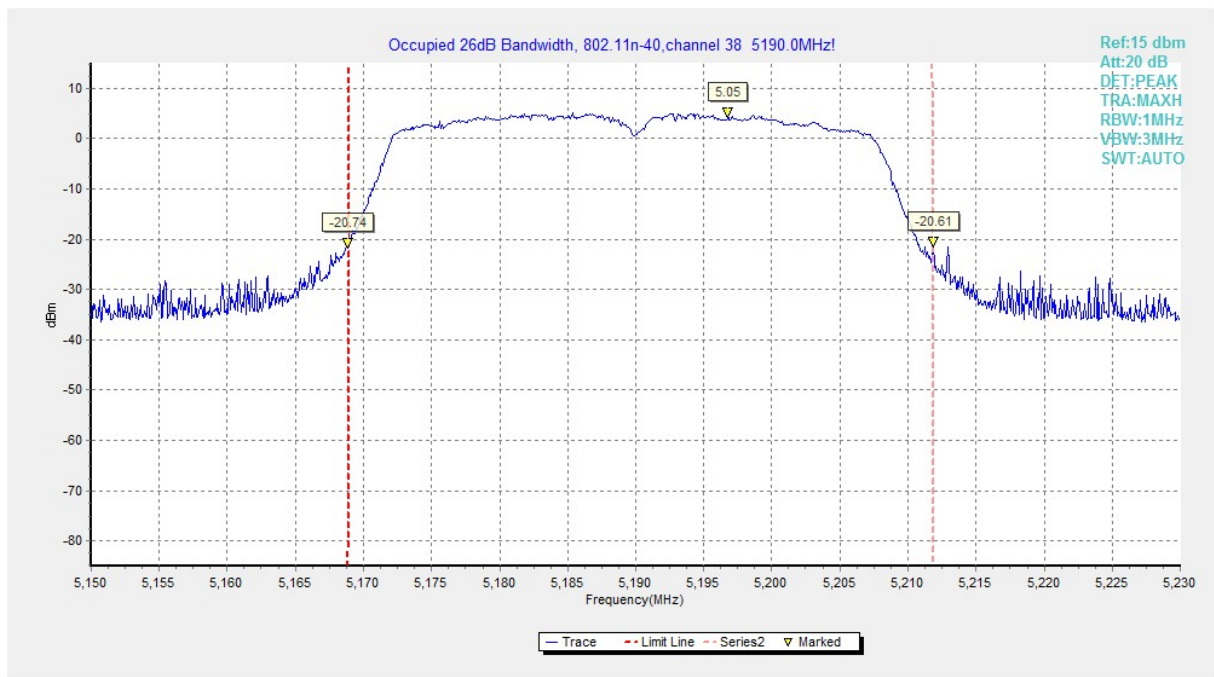


Fig. 19 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

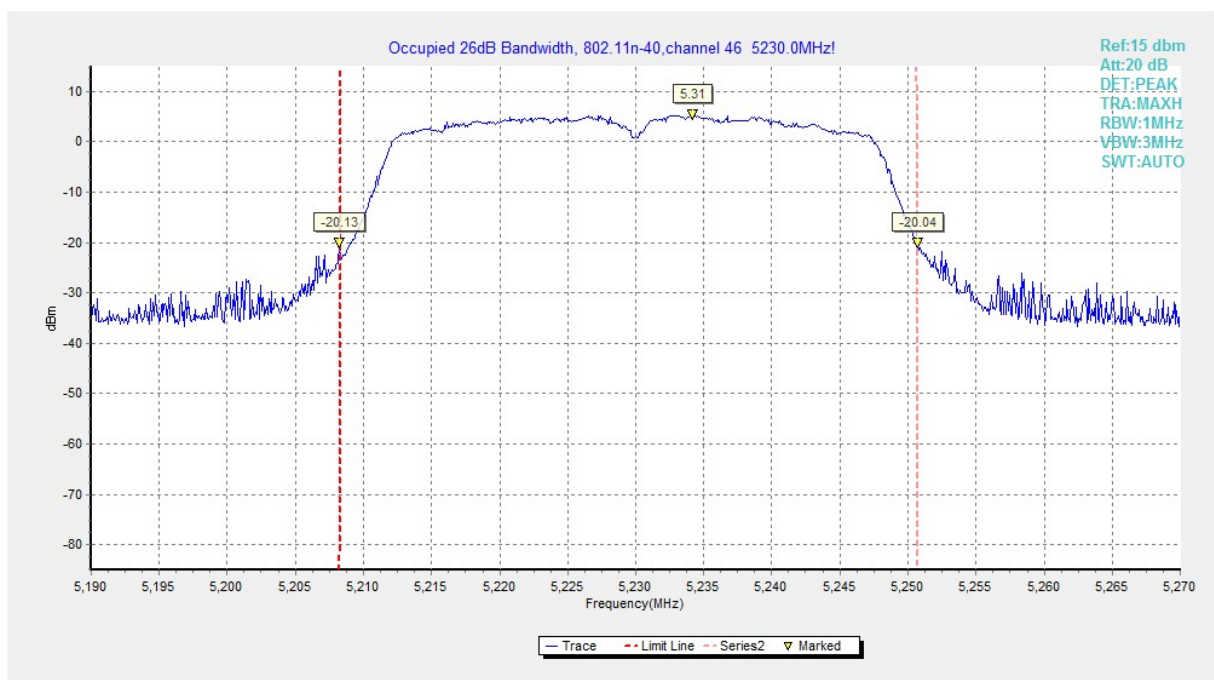


Fig. 20 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

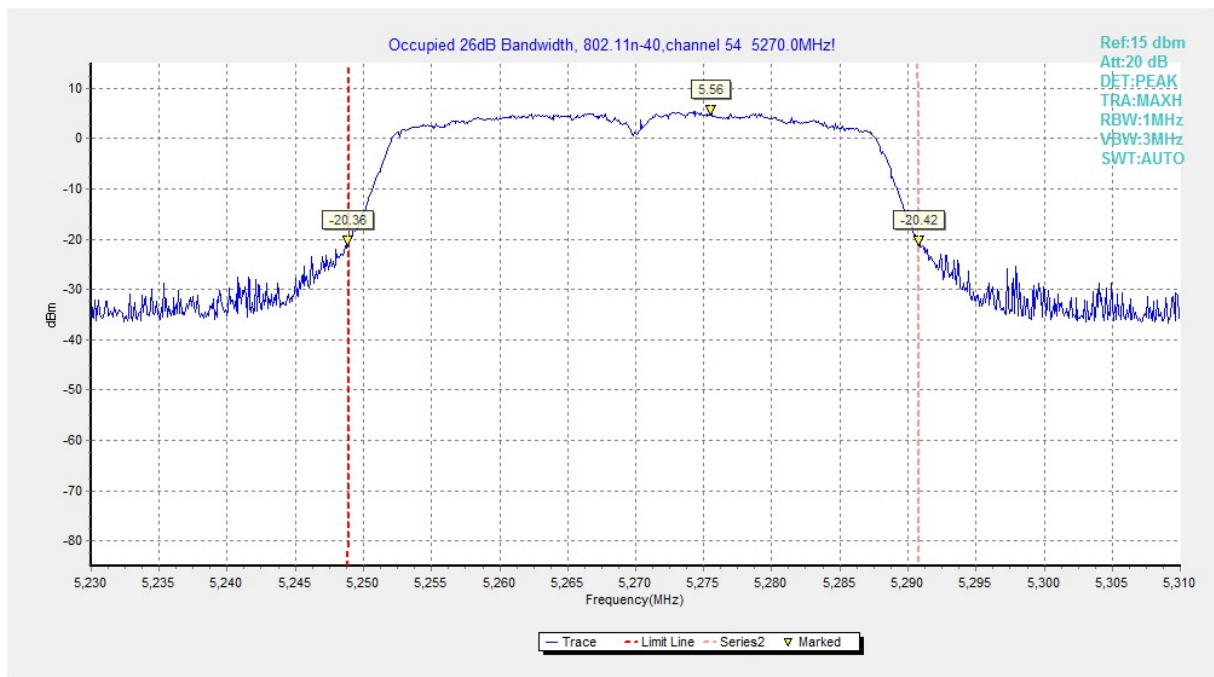


Fig. 21 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

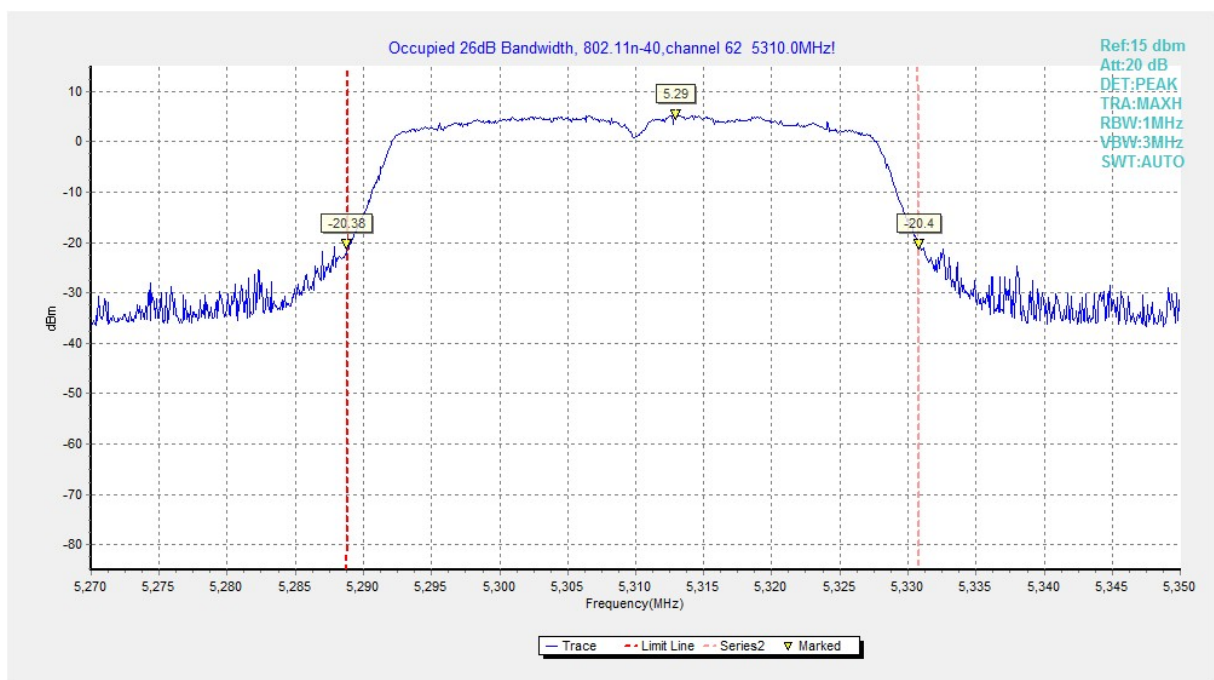


Fig. 22 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

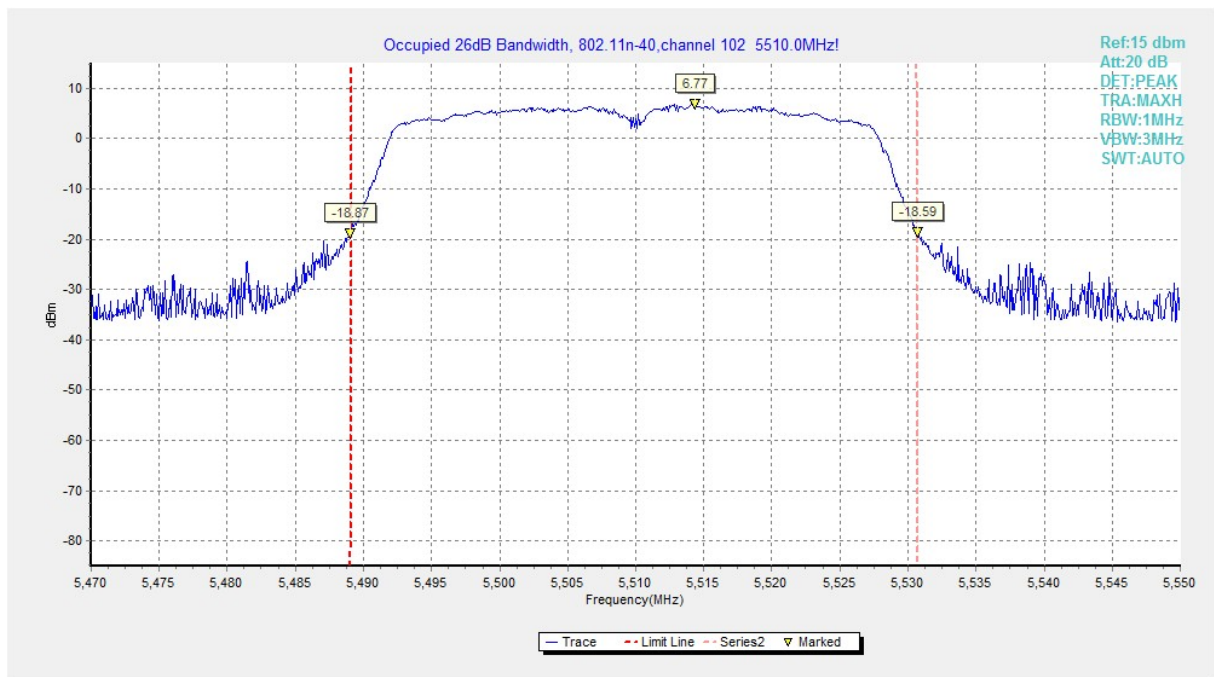


Fig. 23 Occupied 26dB Bandwidth (802. 11n-HT40, 5510MHz)

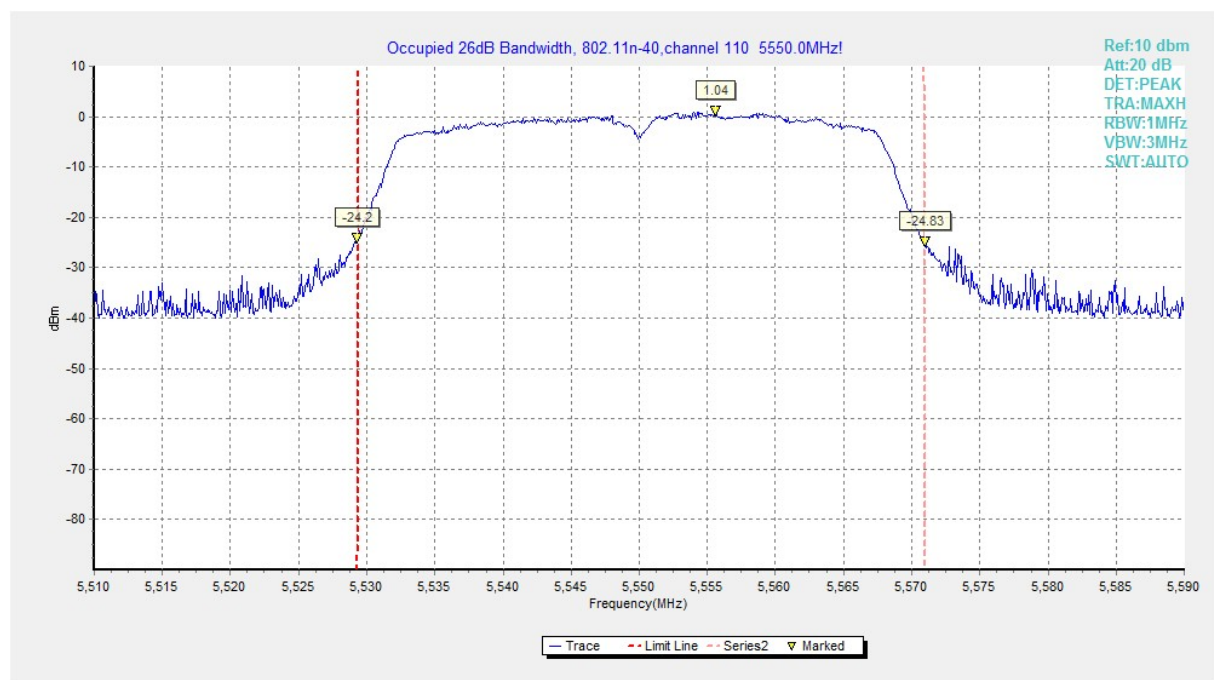


Fig. 24 Occupied 26dB Bandwidth (802. 11n-HT40, 5550MHz)

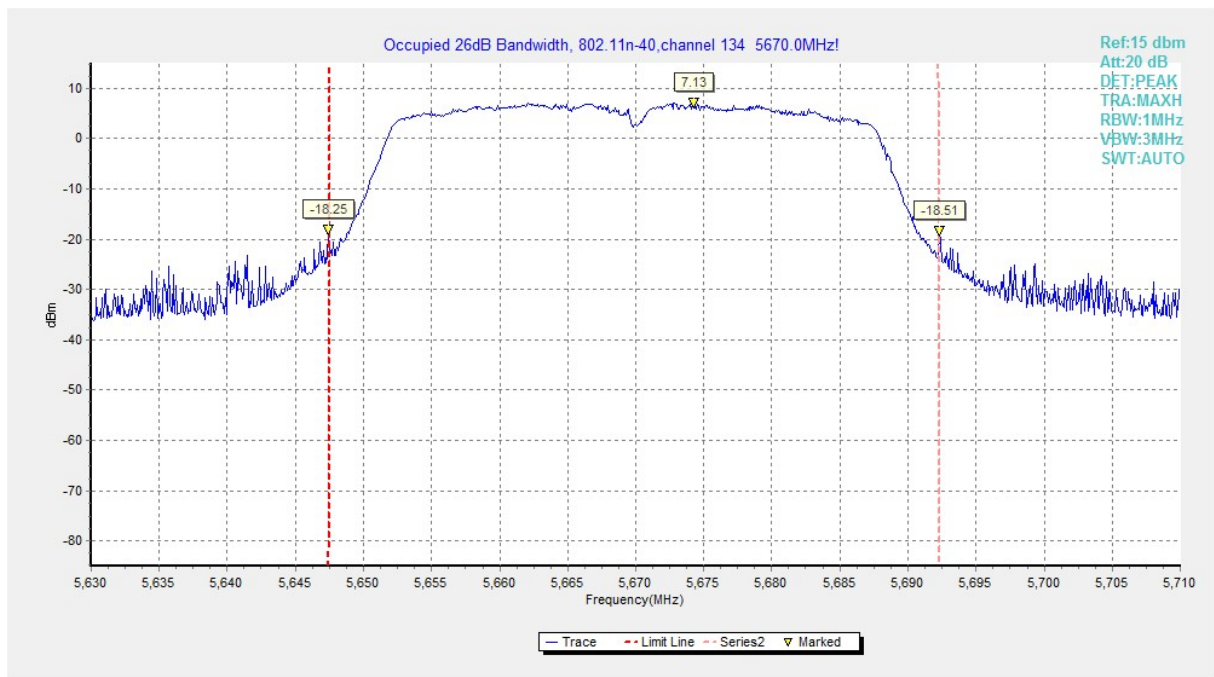


Fig. 25 Occupied 26dB Bandwidth (802. 11n-HT40, 5670MHz)

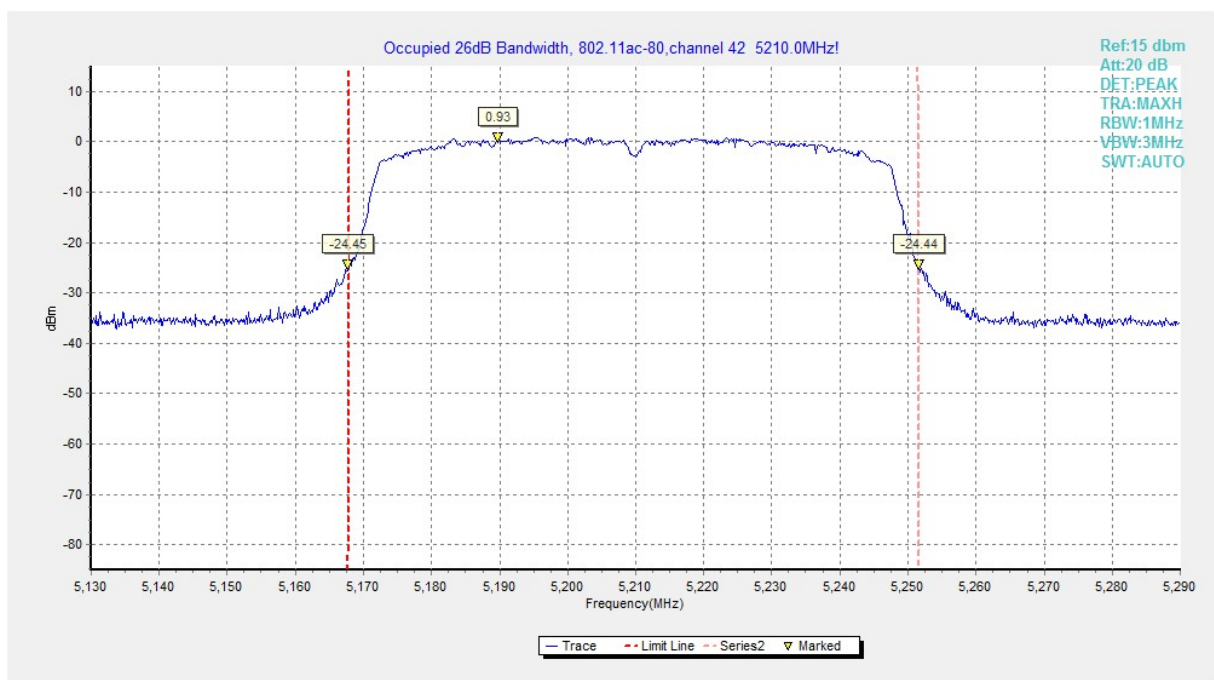


Fig. 26 Occupied 26dB Bandwidth (802. 11ac-HT80, 5210MHz)

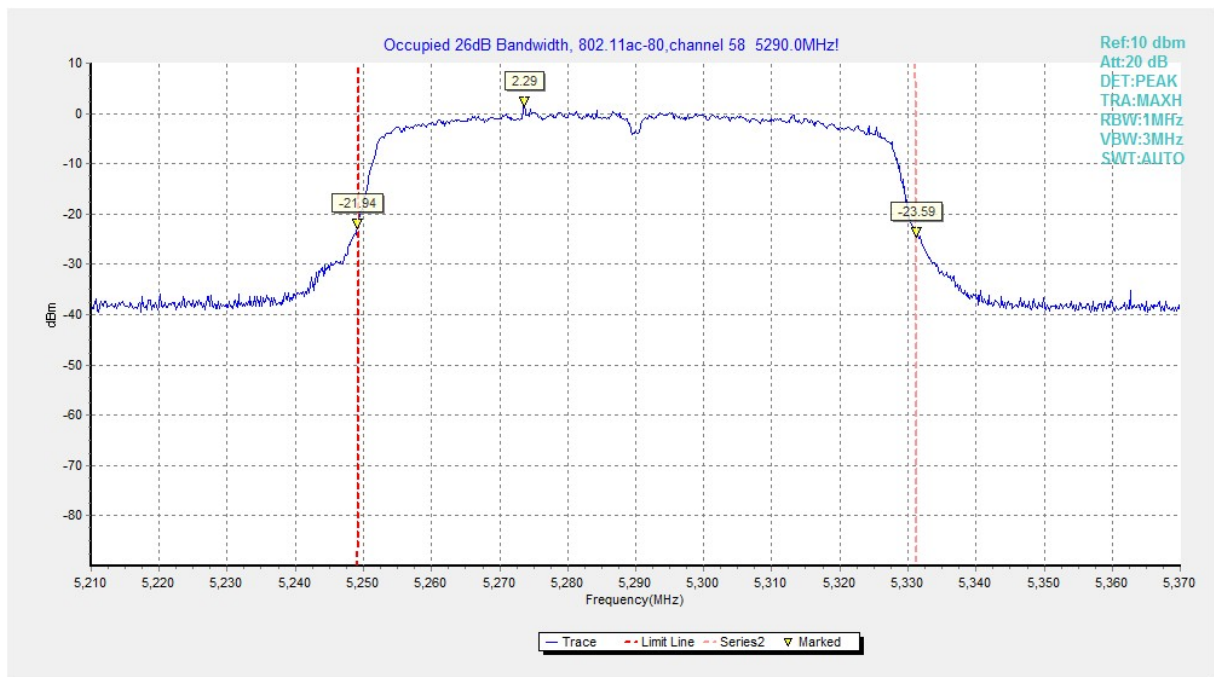


Fig. 27 Occupied 26dB Bandwidth (802. 11ac-HT80, 5290MHz)

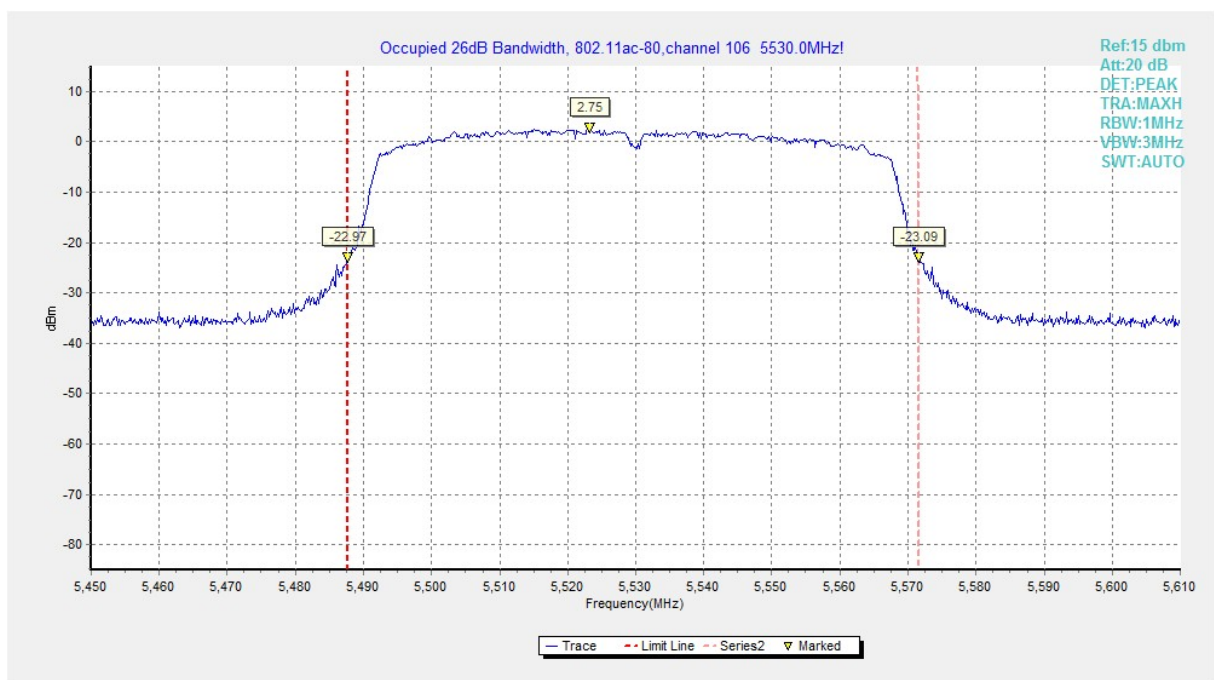


Fig. 28 Occupied 26dB Bandwidth (802. 11ac-HT80, 5530MHz)

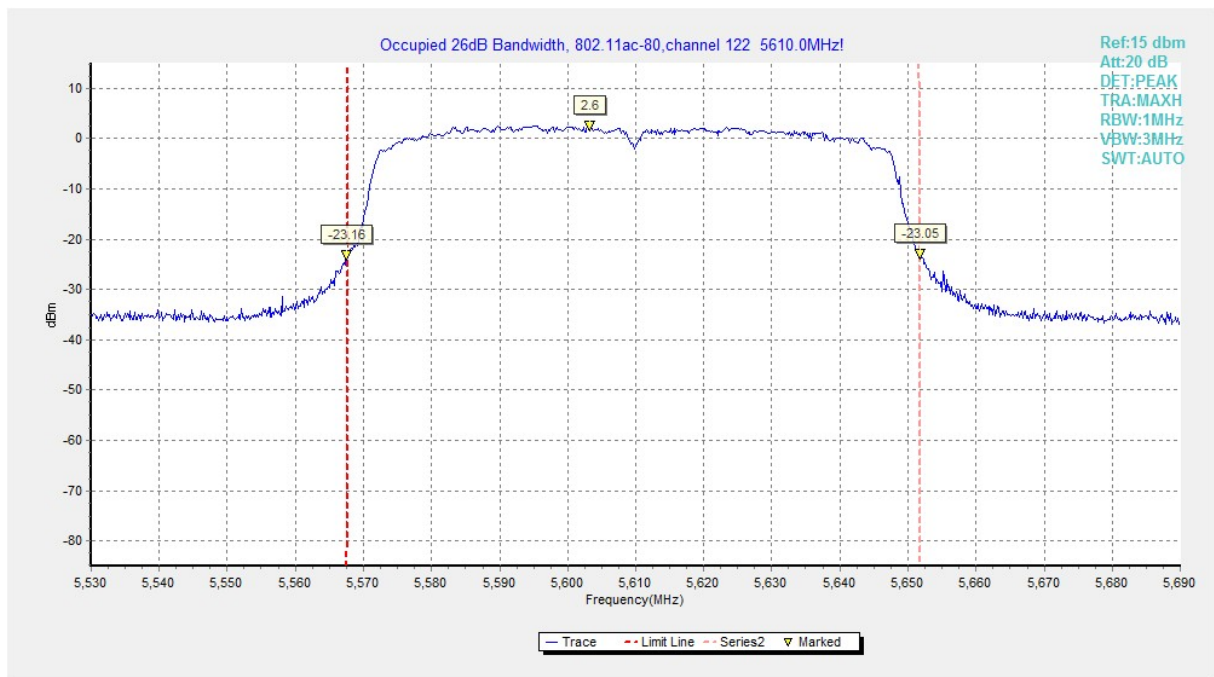


Fig. 29 Occupied 26dB Bandwidth (802. 11ac-HT80, 5610MHz)

A.5. Band Edges Compliance

A5.1 Band Edges - conducted

Measurement Limit:

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

The measurement is made according to KDB 789033

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Measurement Result:

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

Conclusion: PASS

Test graphs as below:

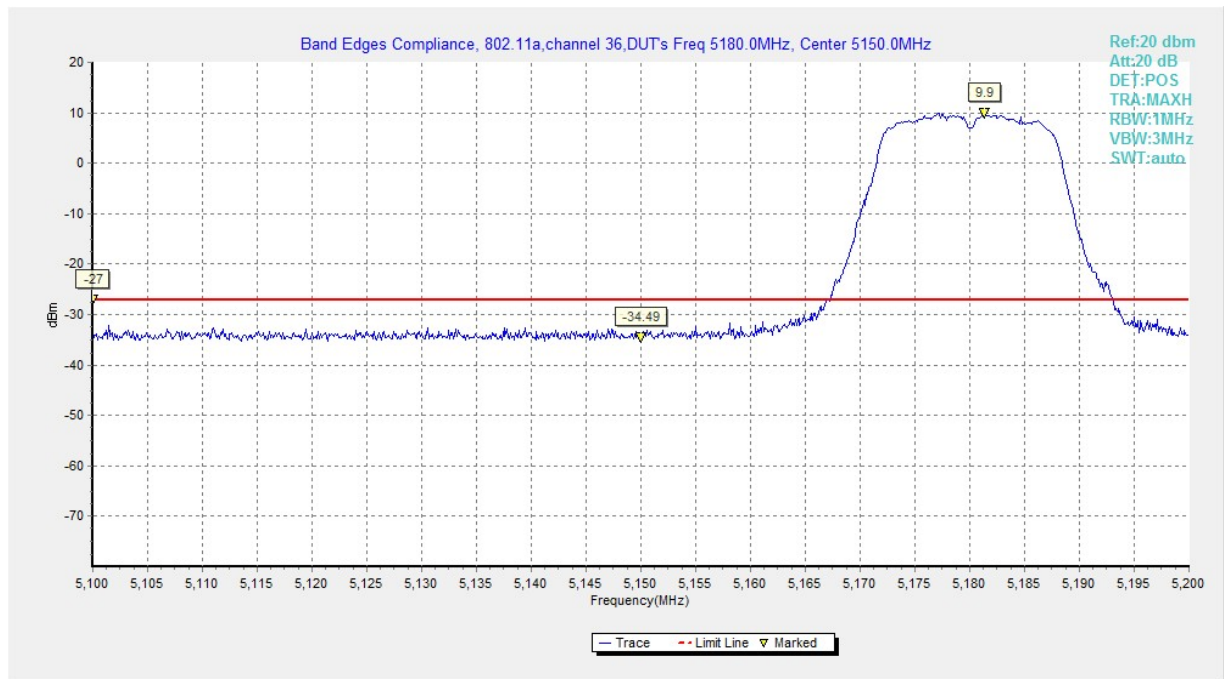


Fig. 30 Band Edges (802.11a, 5180MHz)

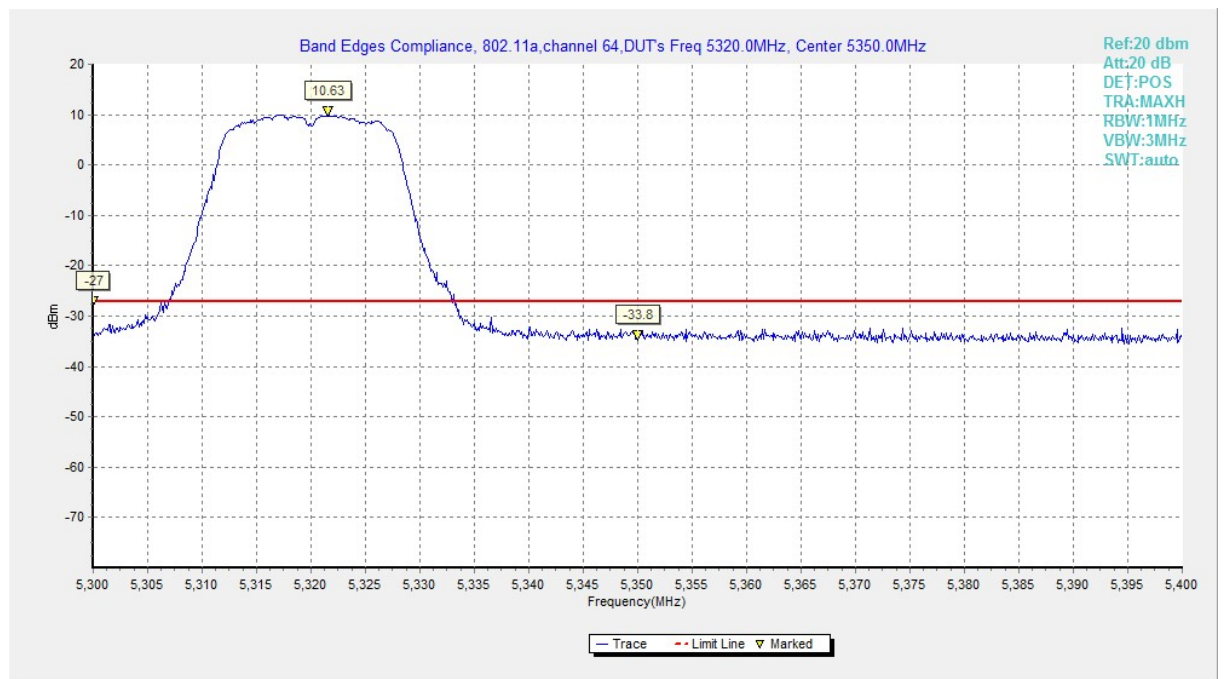


Fig. 31 Band Edges (802.11a, 5320MHz)

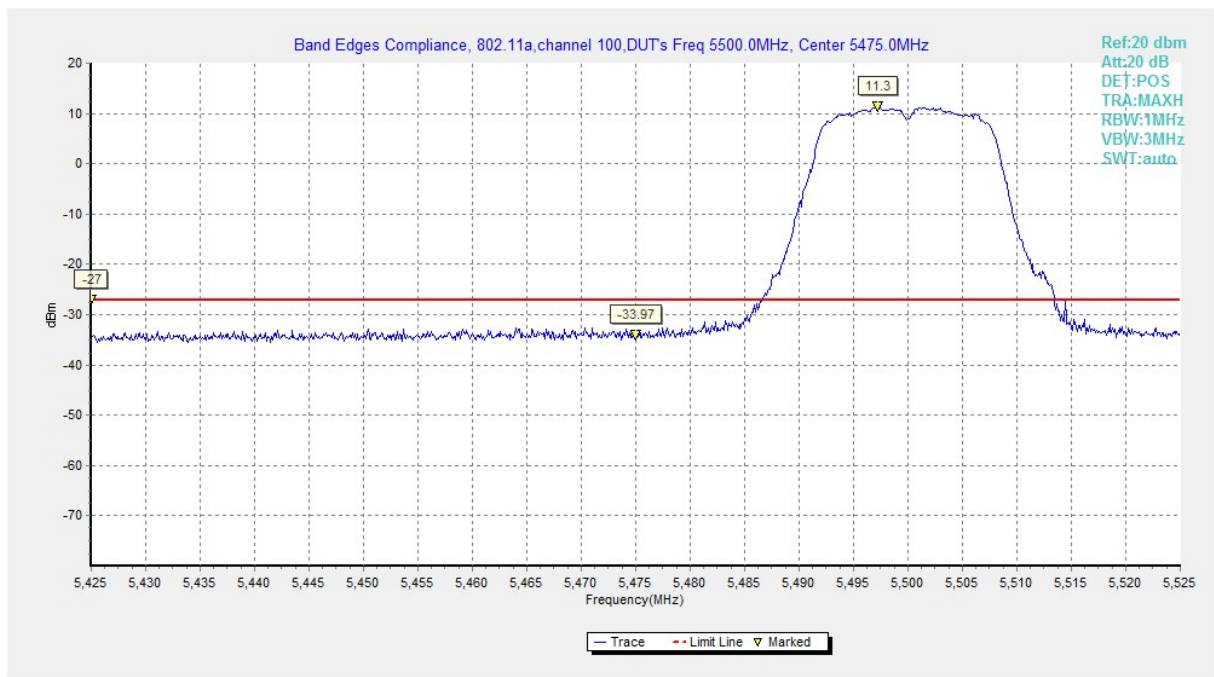


Fig. 32 Band Edges (802.11a, 5500MHz)

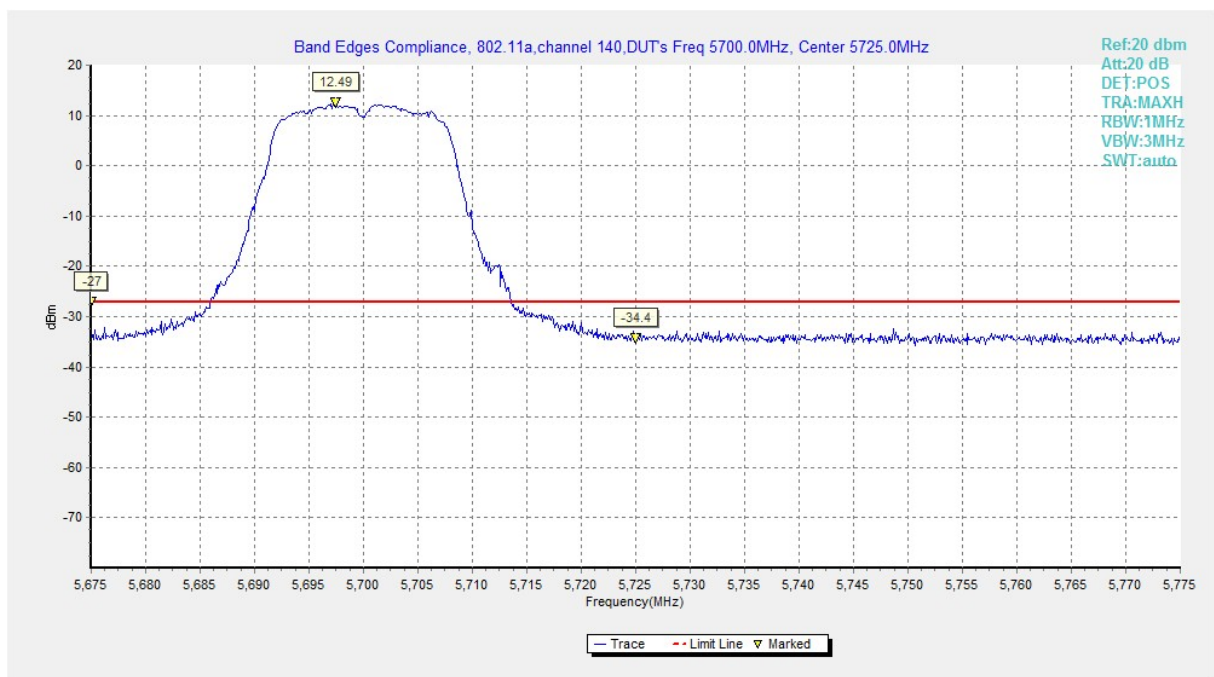


Fig. 33 Band Edges (802.11a, 5700MHz)

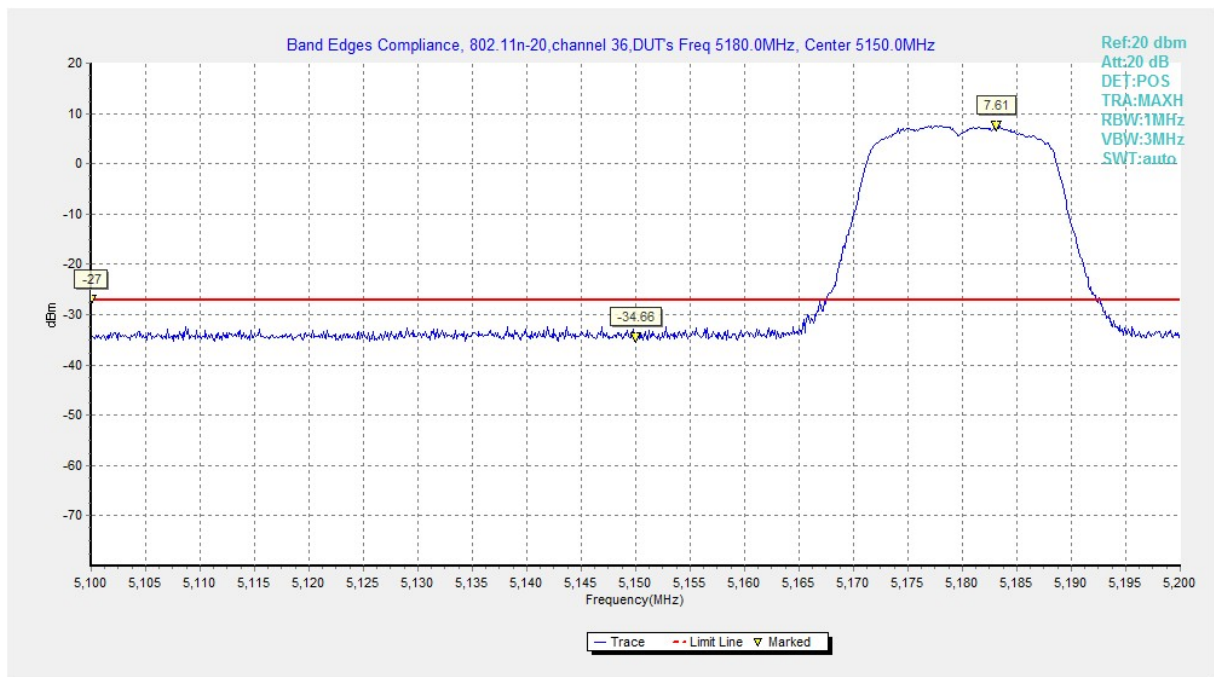


Fig. 34 Band Edges (802.11n-HT20, 5180MHz)

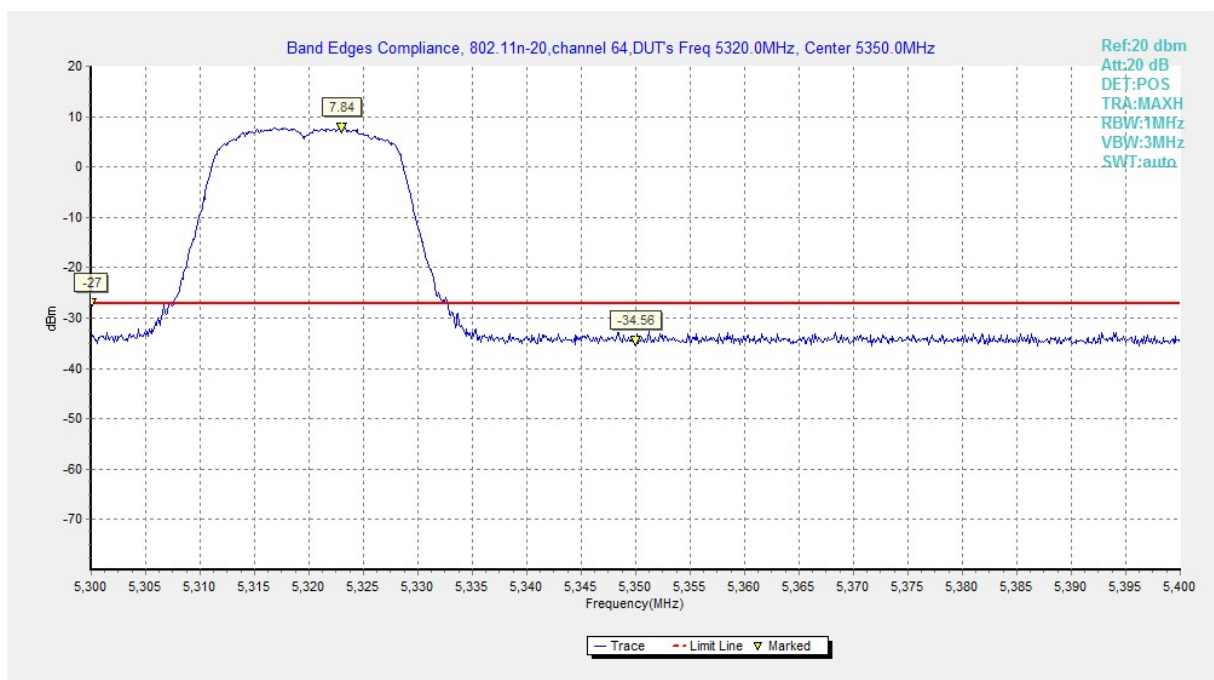


Fig. 35 Band Edges (802.11n-HT20, 5320MHz)

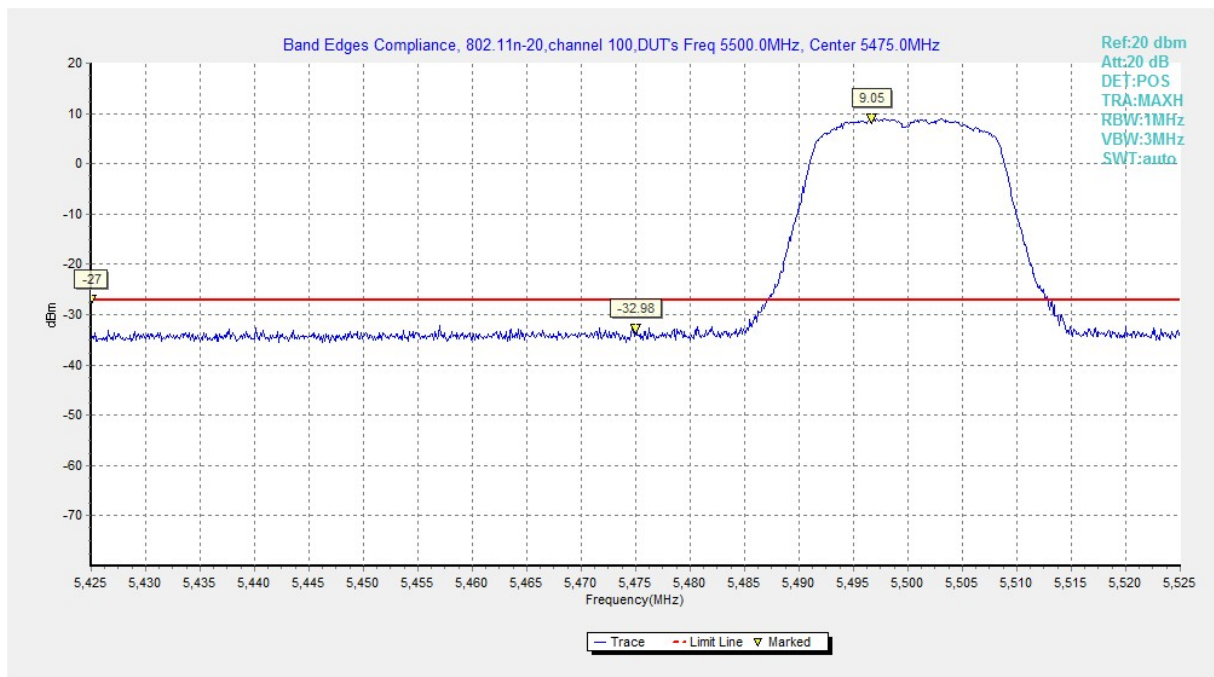


Fig. 36 Band Edges (802.11n-HT20, 5500MHz)

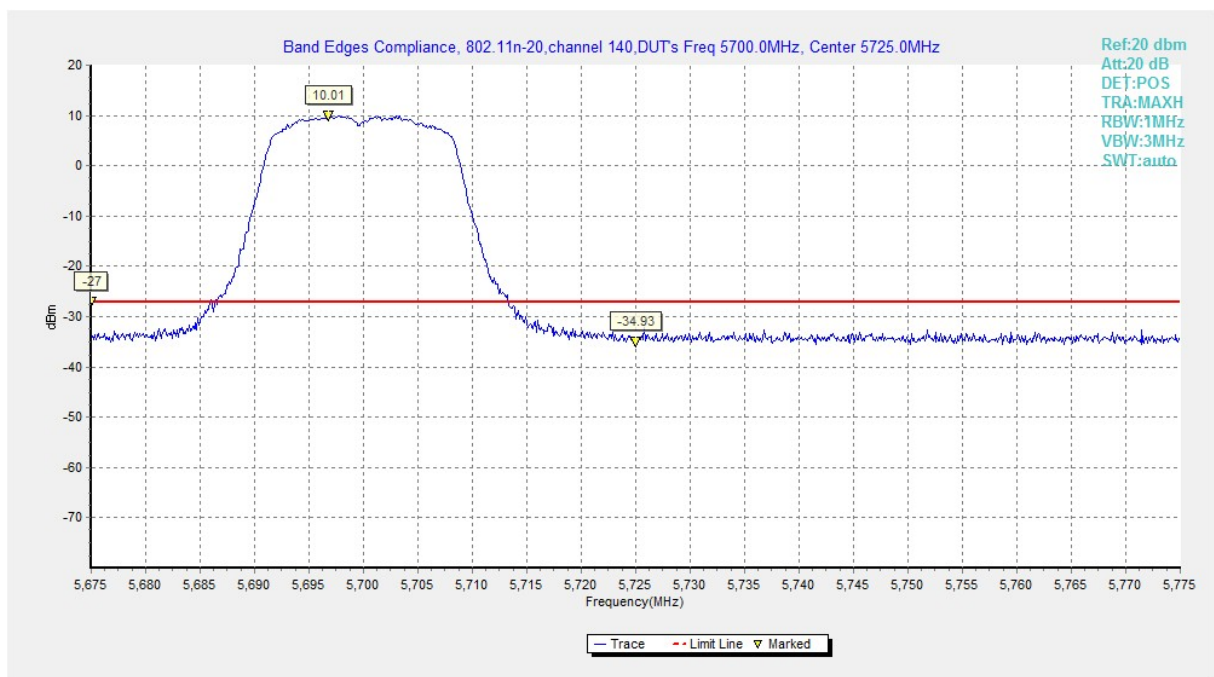


Fig. 37 Band Edges (802.11n-HT20, 5700MHz)

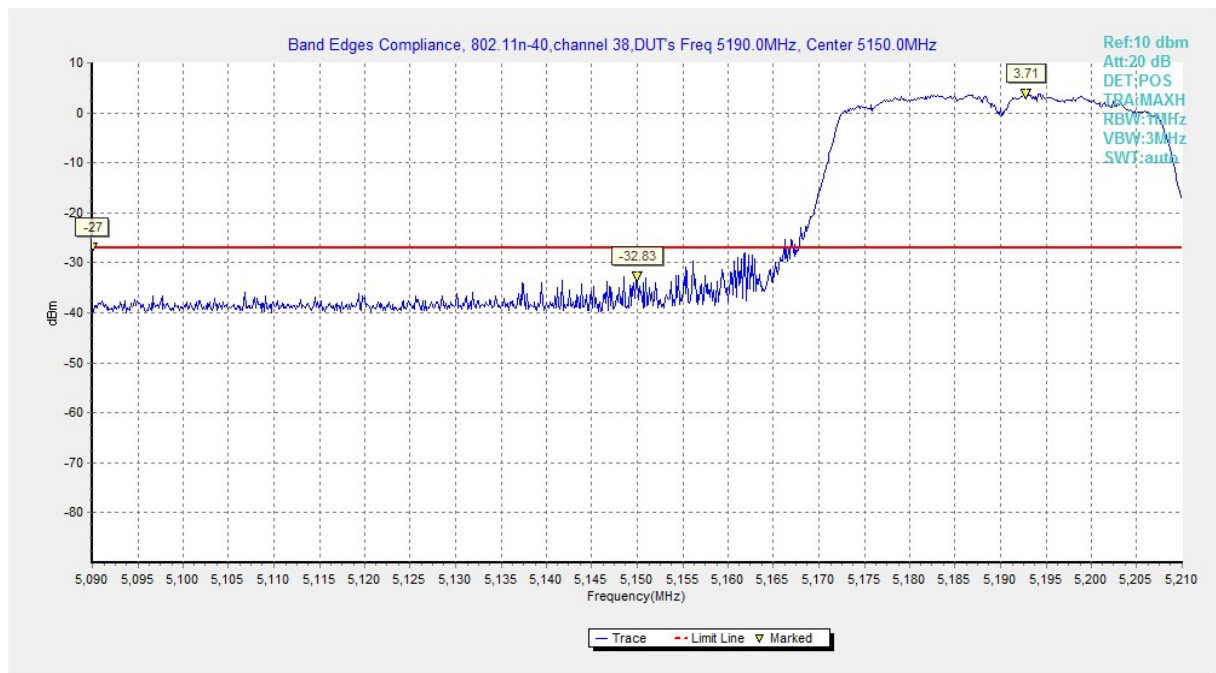


Fig. 38 Band Edges (802.11n-HT40, 5190MHz)

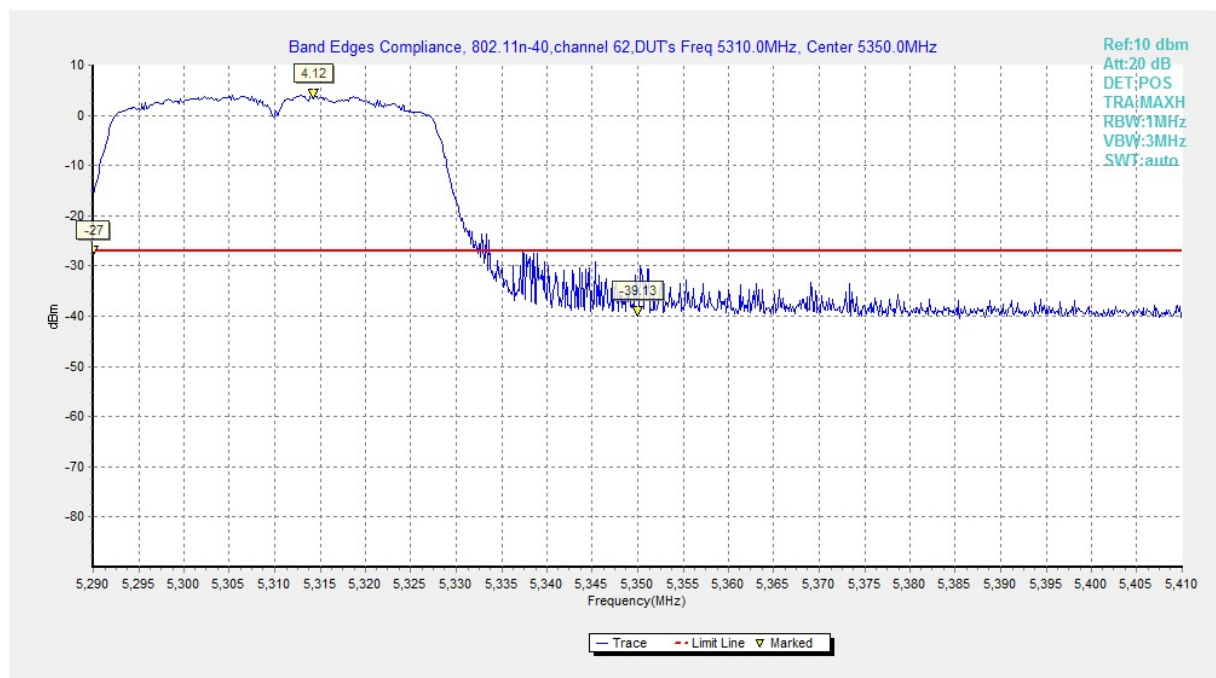


Fig. 39 Band Edges (802.11n-HT40, 5310MHz)

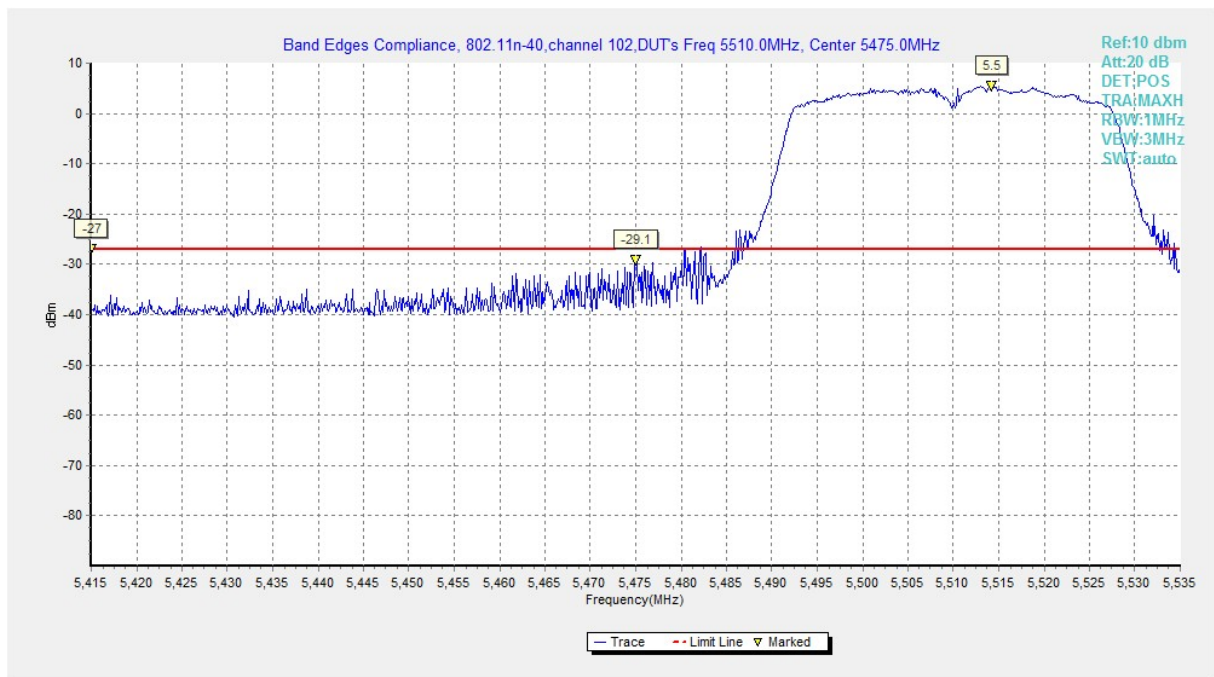


Fig. 40 Band Edges (802.11n-HT40, 5510MHz)

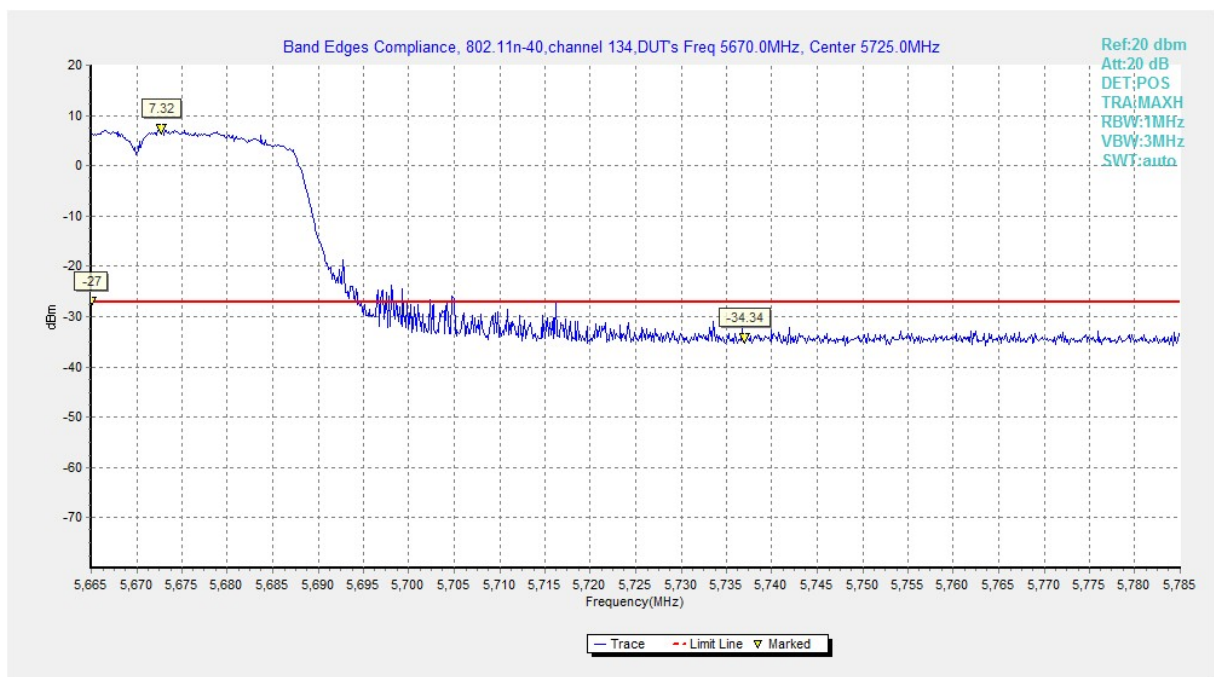


Fig. 41 Band Edges (802.11n-HT40, 5670MHz)