FCC PART 15
TEST REPORT
No. I18Z60297-IOT06

for

HMD Global Oy

Smart phone

TA-1075

With

FCC ID: 2AJOTTA-1075

Hardware Version: 0401/0405

Software Version: 00WW_0_266

Issued Date: 2018-06-11

TESTING
NVLAP LAB CODE 600118-0

Note:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I18Z60297-IOT06	Rev.0	1st edition	2018-06-05
I18Z60296-IOT06	Rev.1	Update Maximum output Power	2018-06-11

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1. TEST LATORATORY

1.1. TestingLocation

Conducted testing Location: CTTL(huayuan North Road)

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

Radiated testing Location: CTTL(BDA)

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

1.2. TestingEnvironment

Normal Temperature: 15-35℃

Extreme Temperature: -10/+55℃

Relative Humidity: 20-75%

1.3. Project data

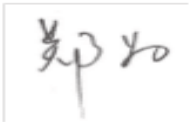
Testing Start Date: 2018-04-08

Testing End Date: 2018-05-21

1.4. Signature

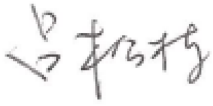
Jiang Xue

(Prepared this test report)



Zheng Wei

(Reviewed this test report)



Lv Songdong

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	HMD Global Oy
Address:	Karaportti 2 02610 Espoo FINLAND
City:	Espoo
Postal Code:	/
Country:	FINLAND
Telephone:	+358 408036126
Fax:	+97143697604

2.2. Manufacturer Information

Company Name:	HMD Global Oy
Address:	Karaportti 2 02610 Espoo FINLAND
City:	Espoo
Postal Code:	/
Country:	FINLAND
Telephone:	+358 408036126
Fax:	+97143697604

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

3.1. About EUT

Description	Smart phone
Model name	TA-1075
FCC ID	2AJOTTA-1075
IC ID	/
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
EUT1	/	0401/0405	00WW_0_266
EUT2	/	0401/0405	00WW_0_266

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	Type	SN
AE1	Battery	/	/
AE2	Charger	/	/
AE3	Charger	/	/

AE1

Model	HE336
Manufacturer	SCUD(Fujian) Electronics Co., Ltd.
Capacitance	2900 mAh
Nominal voltage	3.85 V

AE2

Model	AD-10WX
Manufacturer	Salcomp
Length of cable	/

AE3

Model	AD-10WX
Manufacturer	/
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 Smart phone with integrated antennaand 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	2016
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12

5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15E	Sub-clause of IC	Verdict
Maximum Output Power	15.407	/	**BR**
Power Spectral Density	15.407	/	**BR**
Occupied 26dB Bandwidth	15.403	/	**BR**
Band edge compliance	15.209	/	**BR**
Transmitter spurious emissions radiated	15.407	/	**BR**
Spurious emissions radiated < 30 MHz	15.407	/	**BR**
Spurious emissions conducted < 30 MHz	15.407	/	**BR**
Frequency Stability	15.407	/	**BR**
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

The Equipment Under Test (EUT) model TA-1075 (FCC ID: 2AJOTTA-1075) is a variant product of TA-1088 (FCC ID: 2AJOTTA-1088), according to the declaration of changes provided by the applicant and FCC KDB publication 178919 D01, all the test results are derived from test report No. I18Z60296-IOT06. Please refer Annex A for detail data.

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

Temperature	26℃
Voltage	3.8V
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	1 year	2018-06-01
2	Test Receiver	ESCI	100766	Rohde & Schwarz	1 year	2019-05-05
3	LISN	ESH2-Z5	829991/012	Rohde & Schwarz	1 year	2019-03-11
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	100235	Rohde & Schwarz	1 year	2019-03-31
2	BiLog Antenna	VULB9163	9163-483	Schwarzbeck	3 years	2018-08-20
3	Dual-Ridge Waveguide Horn Antenna	3115	6914	ETS-Lindgren	1 years	2018-12-31
4	EMI Antenna	3117	00139065	ETS-Lindgren	3 Years	2020-11-15
5	EMI Antenna	3116	2663	ETS-Lindgren	3 Years	2020-05-31
6	Vector Signal Analyzer	FSV40	101047	Rohde & Schwarz	1 year	2018-07-22

Test Software Utilized

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V9.01.00	R&S
Conducted Continuous Emission	EMC32 V8.52.0	R&S

8. Measurement Uncertainty

8.1. Transmitter Output Power

Measurement Uncertainty: 0.339dB,k=1.96

8.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dBm/MHz,k=1.96

8.3. Occupied Channel Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

8.4. Band Edges Compliance

Measurement Uncertainty : 0.62dBm,k=1.96

8.5. Spurious Emissions

Conducted (k=1.96)

Frequency Range	Uncertainty(dBm)
30MHz ≤ f ≤ 2GHz	1.22
2GHz ≤ f ≤3.6GHz	1.22
3.6GHz ≤ f ≤8GHz	1.22
8GHz ≤ f ≤12.75GHz	1.51
12.75GHz ≤ f ≤26GHz	1.51
26GHz ≤ f ≤40GHz	1.59

Radiated (k=2)

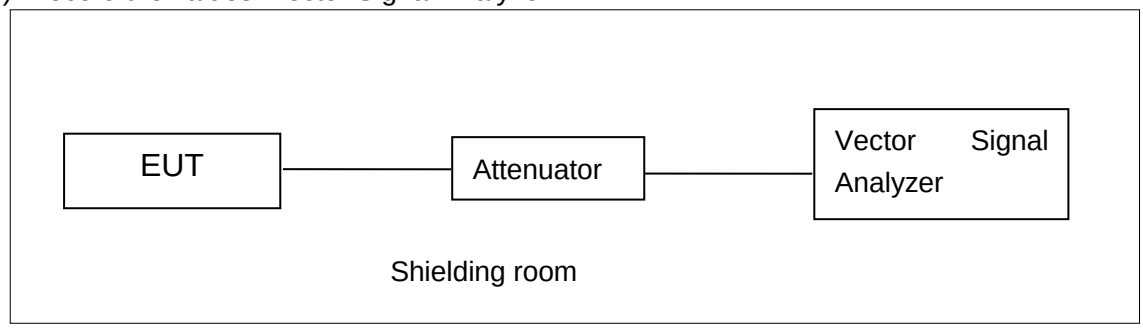
Frequency Range	Uncertainty(dBm)
9kHz-30MHz	
30MHz ≤ f ≤ 1GHz	4.86
1GHz ≤ f ≤18GHz	5.26
18GHz ≤ f ≤40GHz	5.28

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

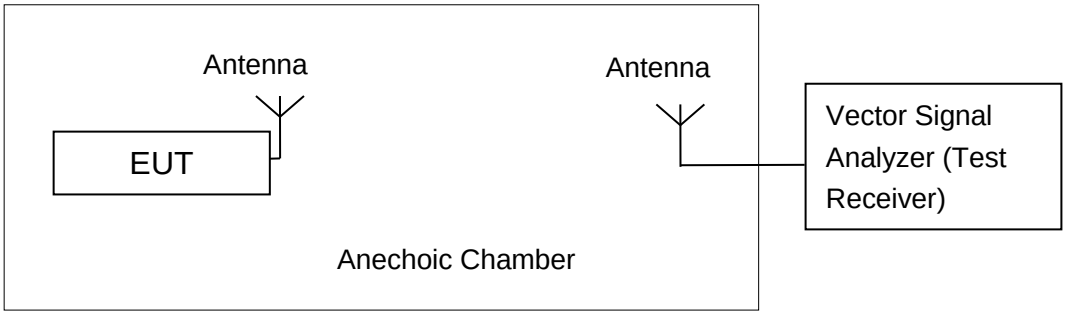
A.1.1. Conducted Measurements

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



A.1.2. Radiated Emission Measurements

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



The measurement is made according to KDB 789033
The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

A.2. Maximum output Power

Measurement Limit and Method:

Standard	Frequency (MHz)	Limit (dBm)
FCC CRF Part 15.407(a)	5150MHz~5250MHz	24dBm
	5250MHz~5350MHz	24dBm or 11+10logB
	5470MHz~5725MHz	24dBm or 11+10logB

Limit use the less value, and B is the 26dB bandwidth.

The measurementmethod SA-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)	13.71	12.31	12.17	12.10	12.33	13.86	11.13	11.18
	5200MHz (Ch40)	/	/	/	/	/	13.81	/	/
	5240MHz(Ch48)	/	/	/	/	/	13.87	/	/
	5260MHz(Ch52)	/	/	/	/	/	13.81	/	/
	5280MHz(Ch56)	/	/	/	/	/	13.68	/	/
	5320MHz(Ch64)	/	/	/	/	/	13.83	/	/
	5500MHz(Ch100)	/	/	/	/	/	13.93	/	/
	5580MHz(Ch116)	/	/	/	/	/	13.90	/	/
	5700MHz(Ch140)	/	/	/	/	/	13.79	/	/

The data rate 36Mbps 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)	13.96	14.11	13.96	14.18	13.71	13.22	11.70	11.81
	5200MHz (Ch40)	/	/	/	14.01	/	/	/	/
	5240MHz(Ch48)	/	/	/	13.55	/	/	/	/
	5260MHz(Ch52)	/	/	/	13.95	/	/	/	/
	5280MHz(Ch56)	/	/	/	13.62	/	/	/	/
	5320MHz(Ch64)	/	/	/	13.28	/	/	/	/
	5500MHz(Ch100)	/	/	/	13.45	/	/	/	/
	5580MHz(Ch116)	/	/	/	13.35	/	/	/	/
	5700MHz(Ch140)	/	/	/	12.87	/	/	/	/

The data rate MCS3 s 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)	/	/	/	14.09	/	/	/	/
	5230MHz(Ch46)	/	/	/	14.13	/	/	/	/
	5270MHz(Ch54)	13.75	14.31	14.15	14.37	14.24	12.63	12.71	12.76
	5310MHz(Ch62)	/	/	/	14.03	/	/	/	/
	5510MHz(Ch102)	/	/	/	13.07	/	/	/	/
	5550MHz(Ch110)	/	/	/	12.98	/	/	/	/
	5670MHz(Ch134)	/	/	/	13.13	/	/	/	/

The data rate MCS3 s 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/1MHz)	Conclusion
802.11a	5180 MHz	2.79	P
	5200 MHz	2.85	P
	5240 MHz	2.91	P
	5260 MHz	1.95	P
	5280 MHz	2.12	P
	5320 MHz	2.15	P
	5500 MHz	1.54	P
	5580 MHz	1.25	P
	5700 MHz	0.76	P
802.11n HT20	5180 MHz	4.42	P
	5200 MHz	4.32	P
	5240 MHz	4.37	P
	5260 MHz	3.53	P
	5280 MHz	3.35	P
	5320 MHz	3.20	P
	5500 MHz	2.83	P
	5580 MHz	2.72	P
	5700 MHz	1.89	P
802.11n HT40	5190 MHz	0.44	P
	5230 MHz	0.99	P
	5270 MHz	0.18	P
	5310 MHz	0.70	P
	5510 MHz	-0.59	P
	5550 MHz	-0.60	P
	5670 MHz	-0.55	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	Channel	Occupied 26dB Bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.1	19.85	P
	5200 MHz	Fig.2	19.90	P
	5240 MHz	Fig.3	19.85	P
	5260 MHz	Fig.4	19.80	P
	5280 MHz	Fig.5	19.80	P
	5320 MHz	Fig.6	19.80	P
	5500 MHz	Fig.7	19.85	P
	5580 MHz	Fig.8	19.85	P
	5700 MHz	Fig.9	19.75	P
802.11n HT20	5180 MHz	Fig.10	20.45	P
	5200 MHz	Fig.11	22.10	P
	5240 MHz	Fig.12	22.30	P
	5260 MHz	Fig.13	20.55	P
	5280 MHz	Fig.14	20.50	P
	5320 MHz	Fig.15	20.35	P
	5500 MHz	Fig.16	22.90	P
	5580 MHz	Fig.17	23.85	P
	5700 MHz	Fig.18	23.30	P
802.11n HT40	5190 MHz	Fig.19	43.04	P
	5230 MHz	Fig.20	46.48	P
	5270 MHz	Fig.21	40.32	P
	5310 MHz	Fig.22	40.72	P
	5510 MHz	Fig.23	45.52	P
	5550 MHz	Fig.24	45.12	P
	5670 MHz	Fig.25	45.84	P

Conclusion: PASS

Test graphs as below:

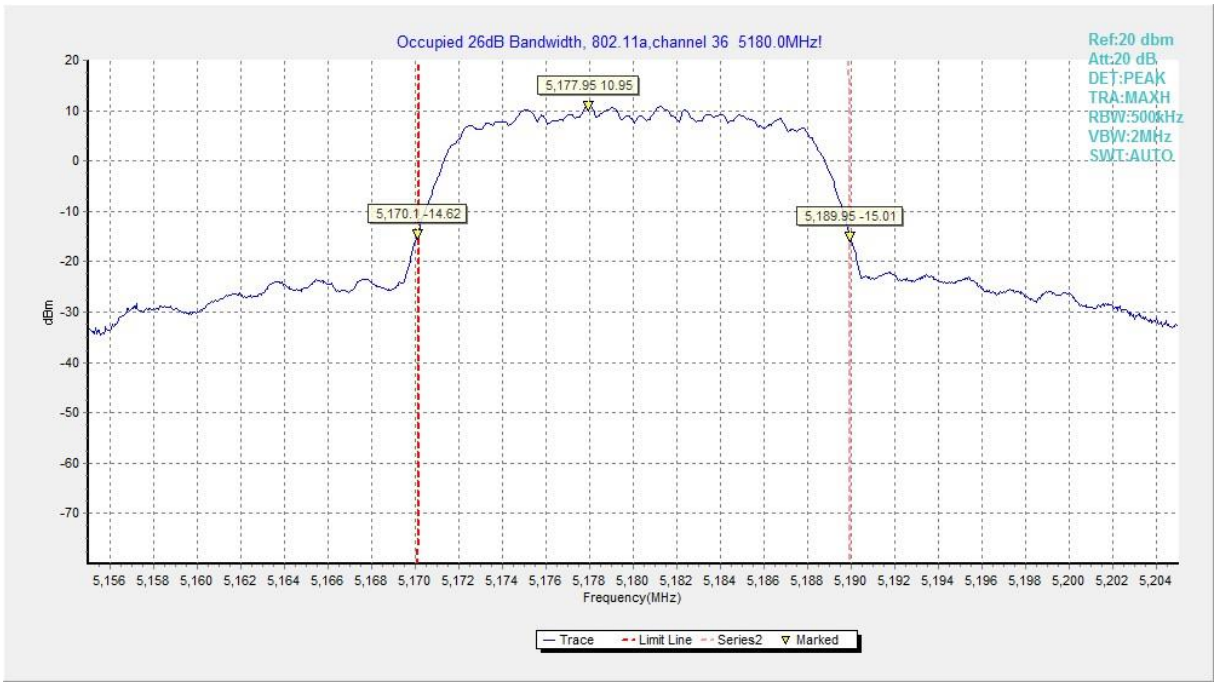


Fig. 1 Occupied 26dB Bandwidth (802.11a, 5180MHz)

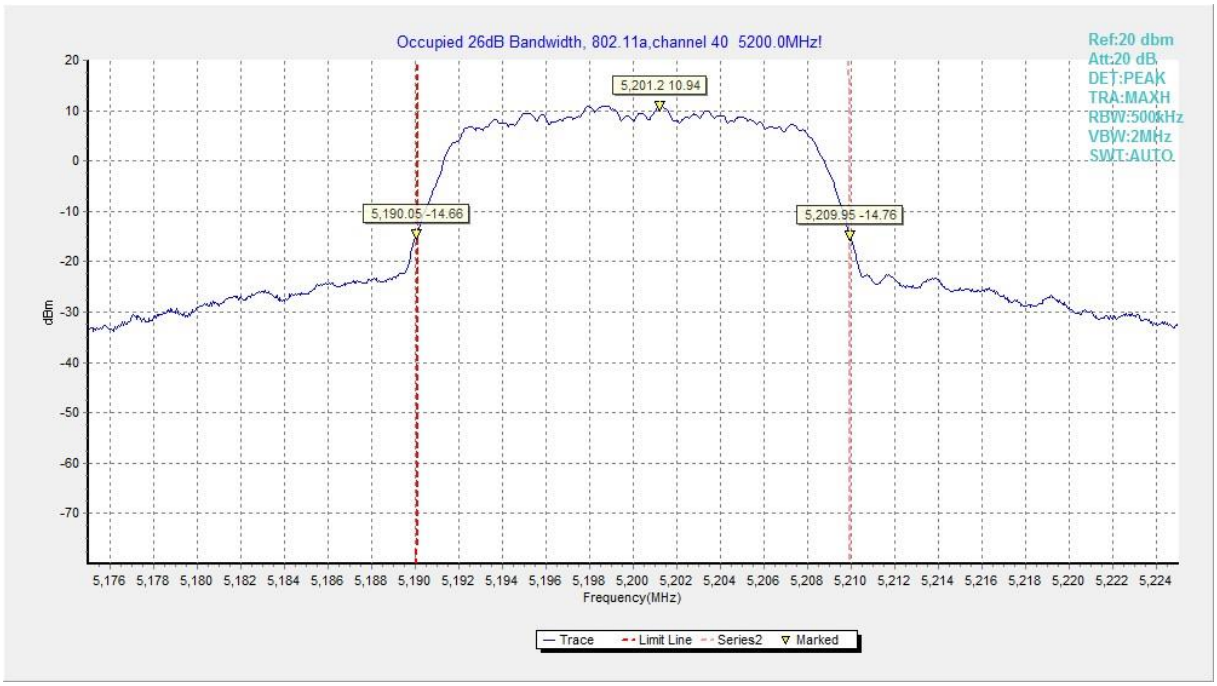


Fig. 2 Occupied 26dB Bandwidth (802.11a, 5200MHz)

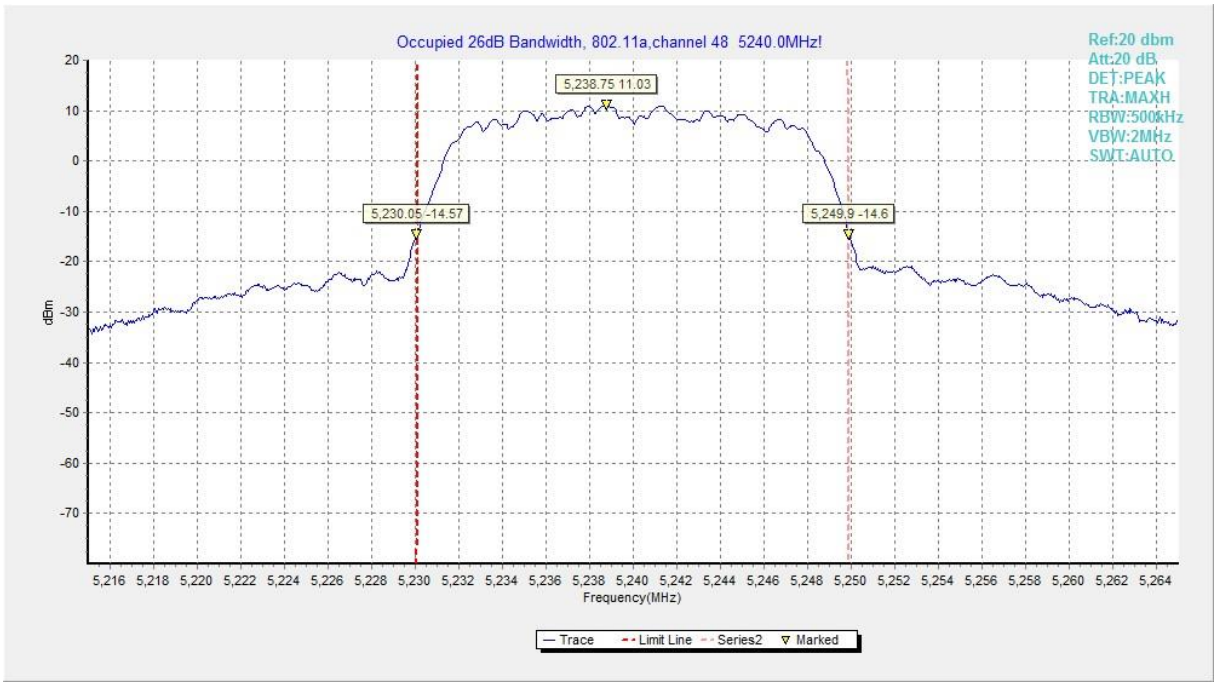


Fig. 3 Occupied 26dB Bandwidth (802.11a, 5240MHz)

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

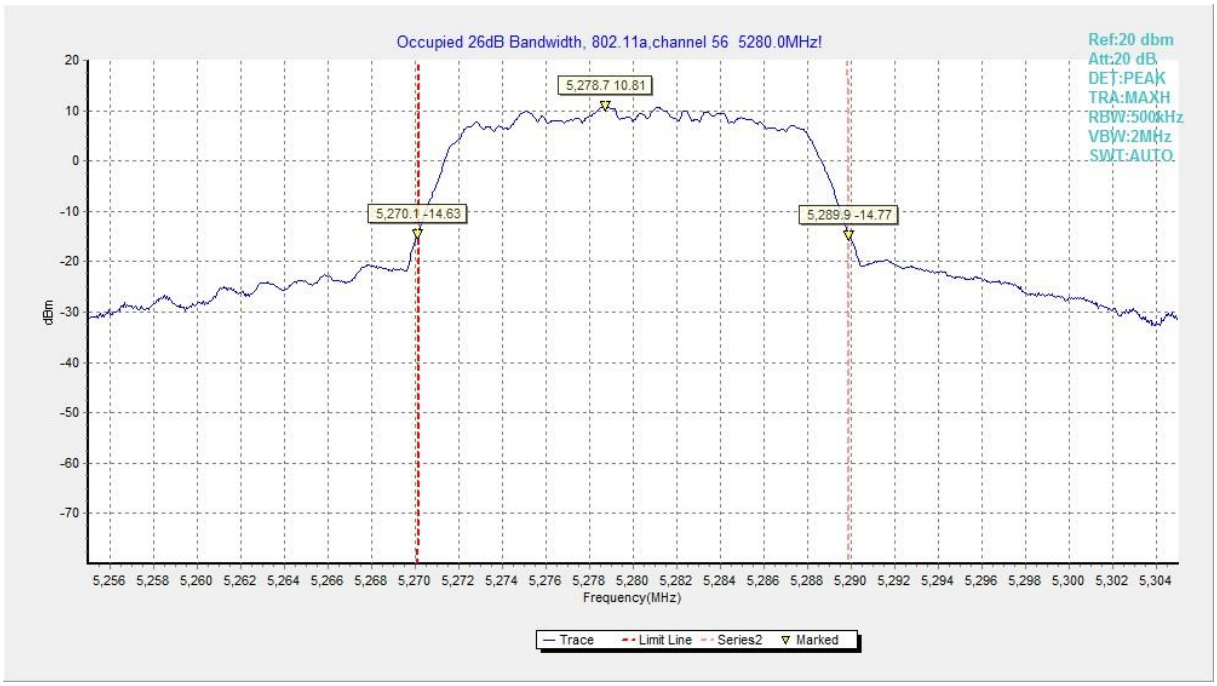


Fig. 5 Occupied 26dB Bandwidth (802.11a, 5280MHz)

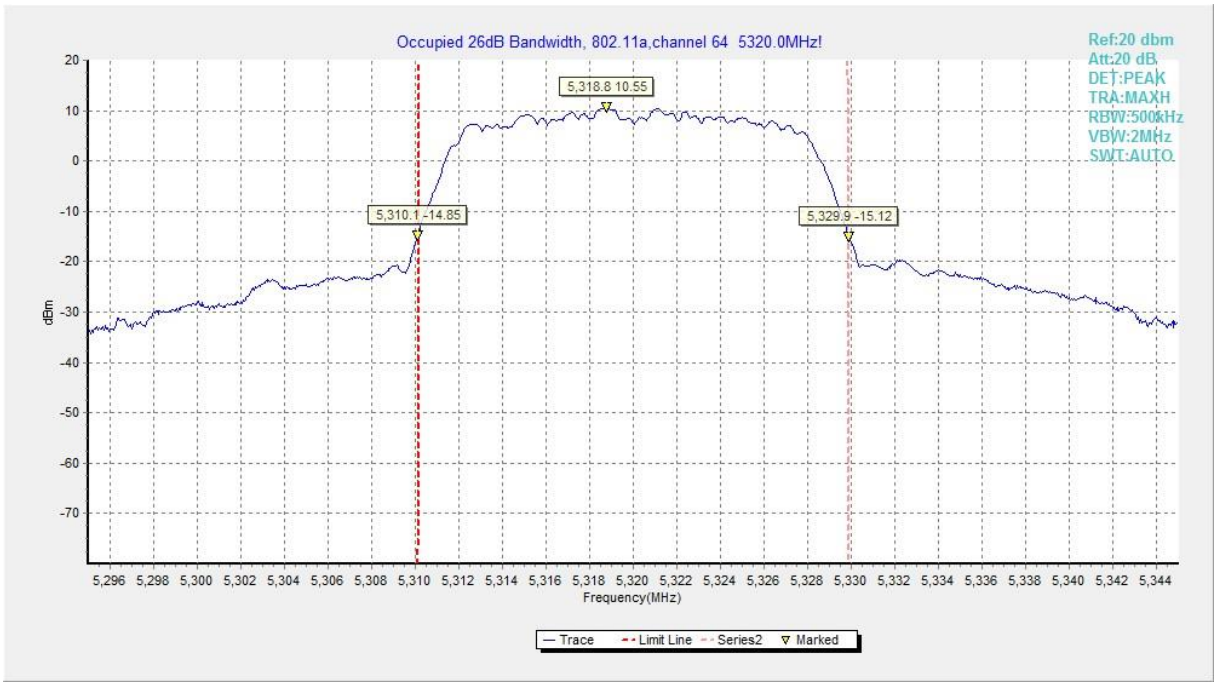


Fig. 6 Occupied 26dB Bandwidth (802.11a, 5320MHz)

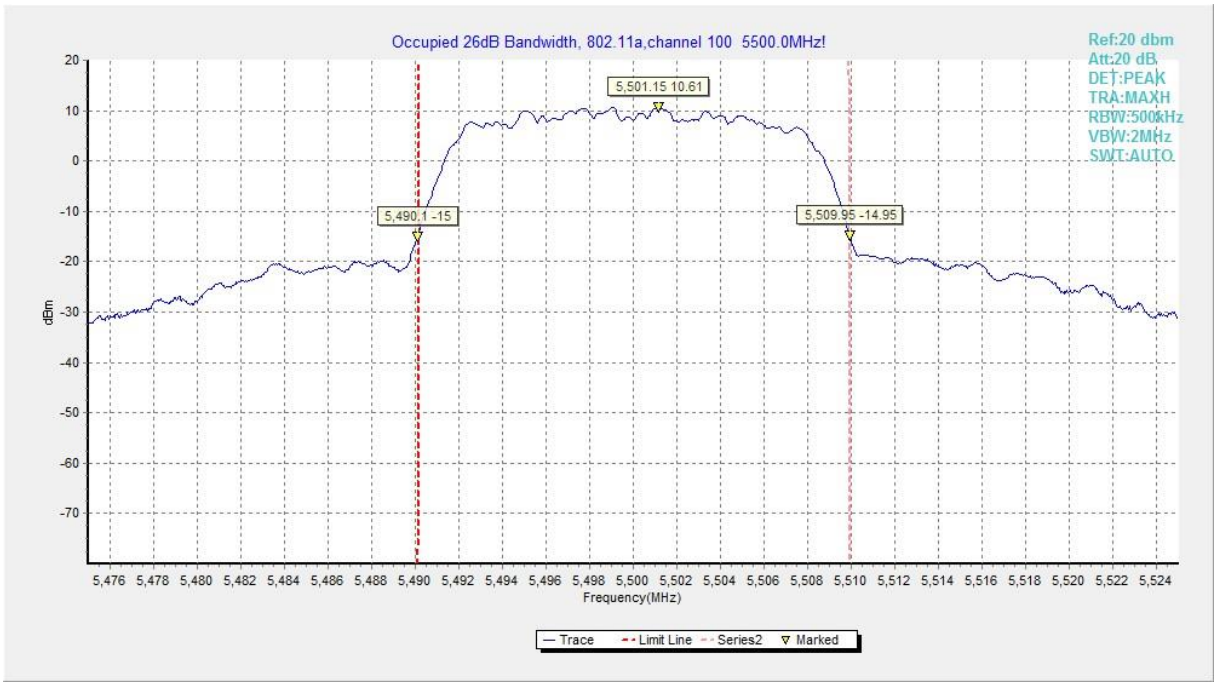


Fig. 7 Occupied 26dB Bandwidth (802.11a, 5500MHz)

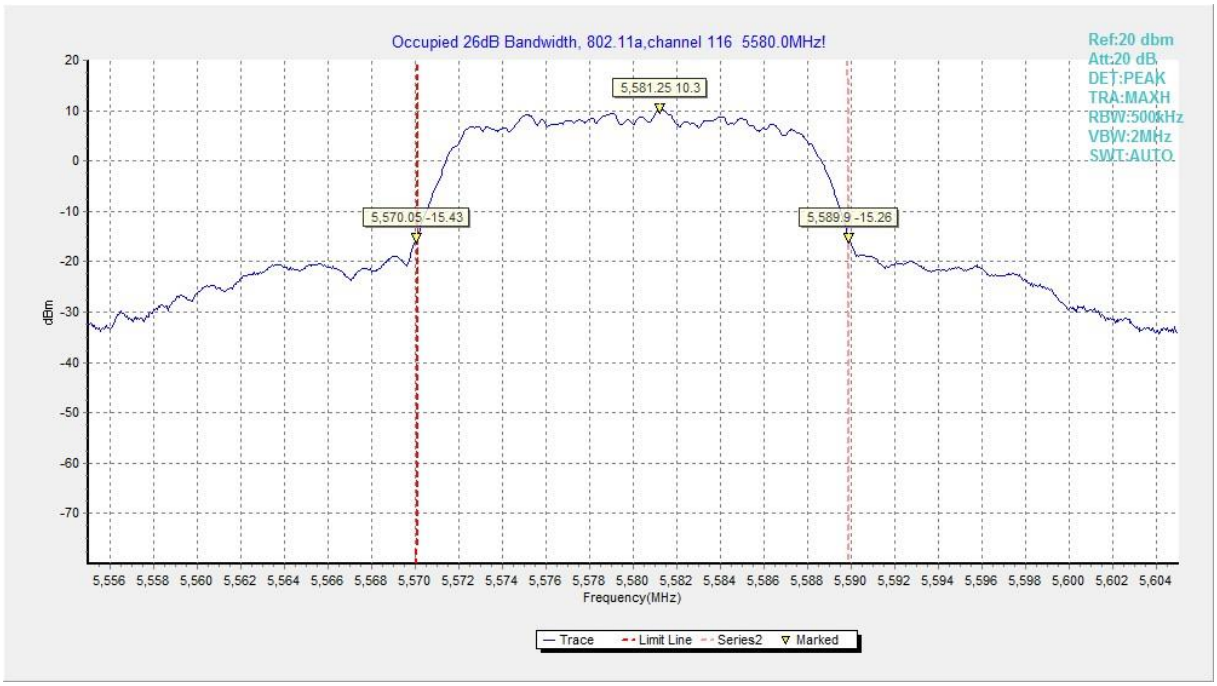


Fig. 8 Occupied 26dB Bandwidth (802.11a, 5580MHz)

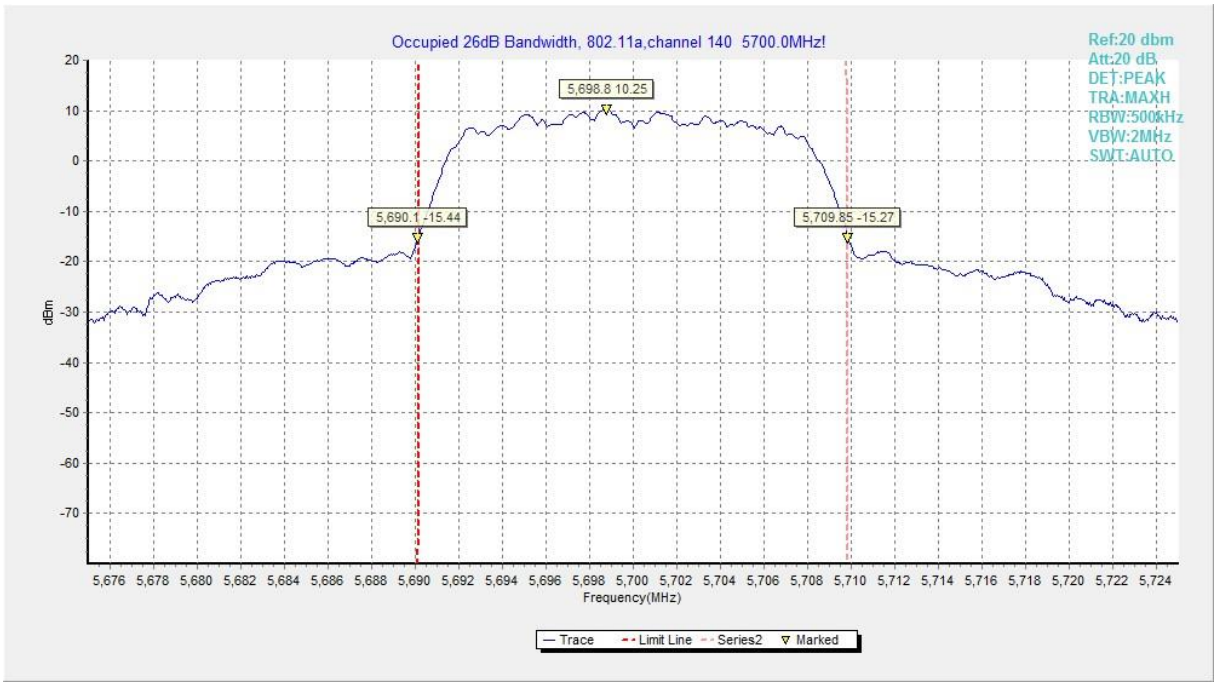


Fig. 9 Occupied 26dB Bandwidth (802.11a, 5700MHz)

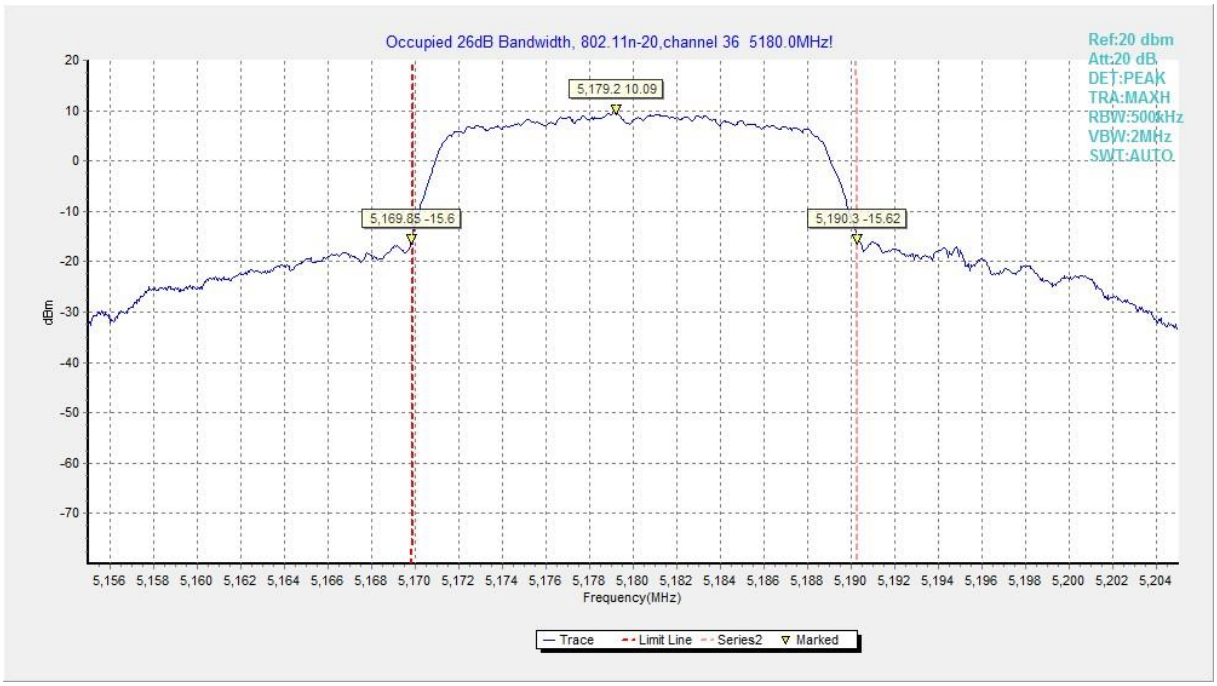


Fig. 10 Occupied 26dB Bandwidth (802.11n-HT20, 5180MHz)

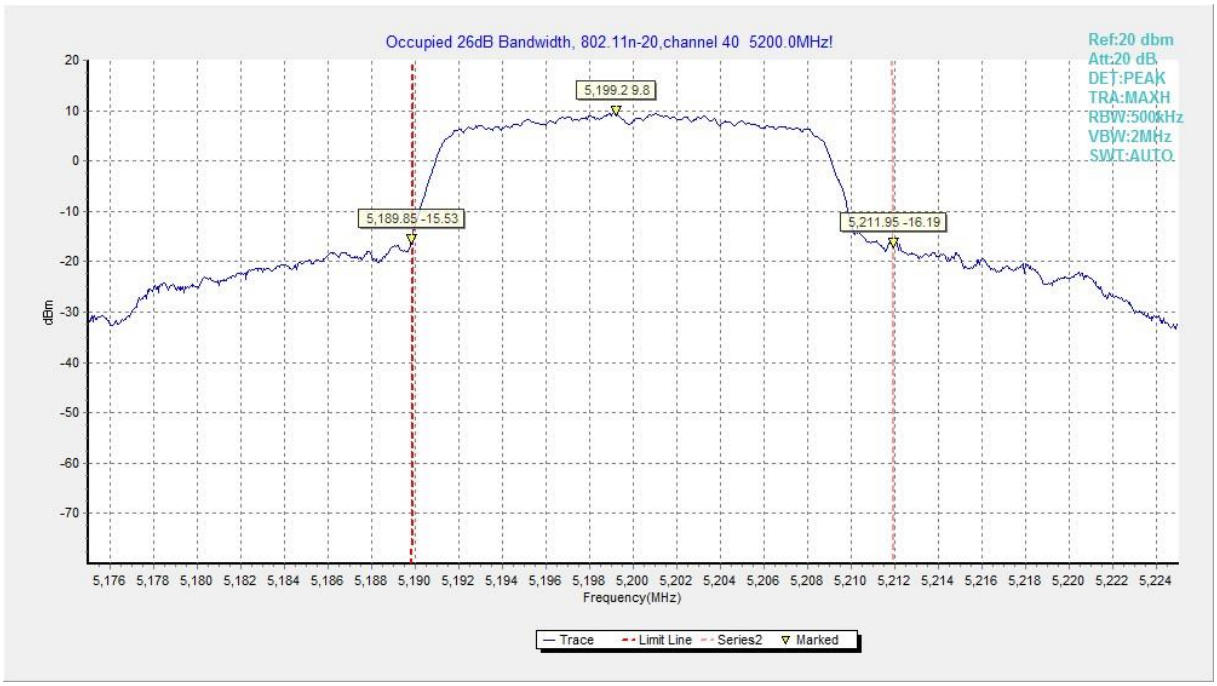


Fig. 11 Occupied 26dB Bandwidth (802.11n-HT20, 5200MHz)

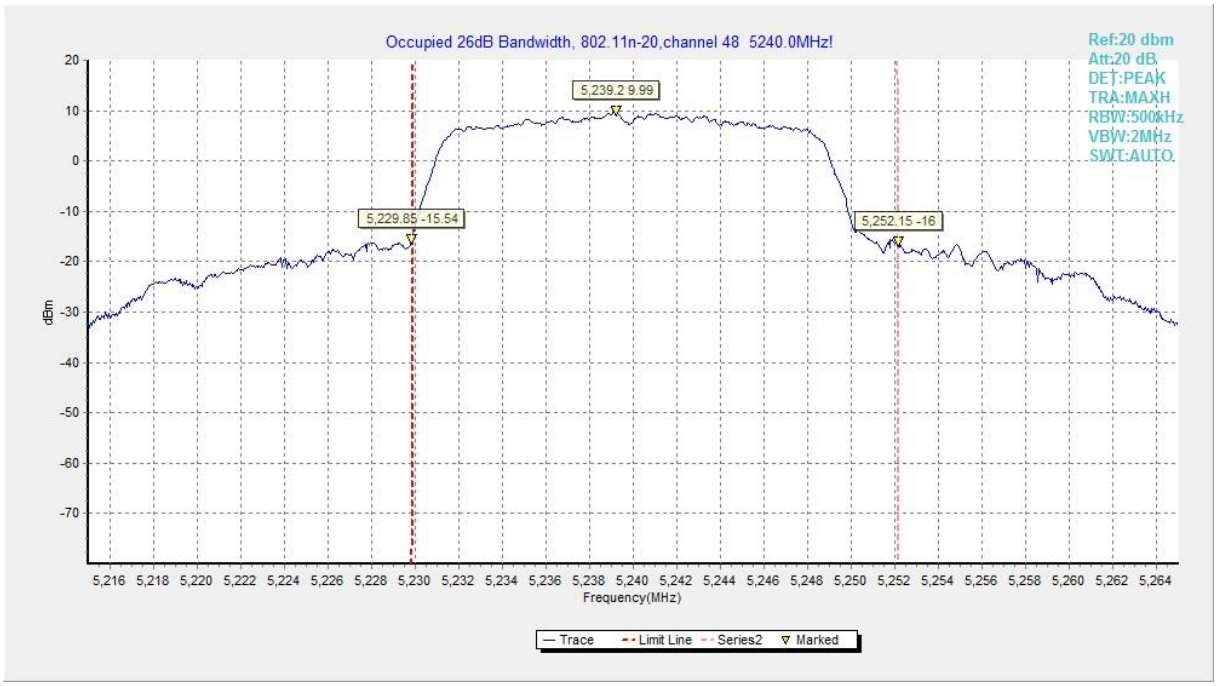


Fig. 12 Occupied 26dB Bandwidth (802.11 n-HT20, 5240MHz)

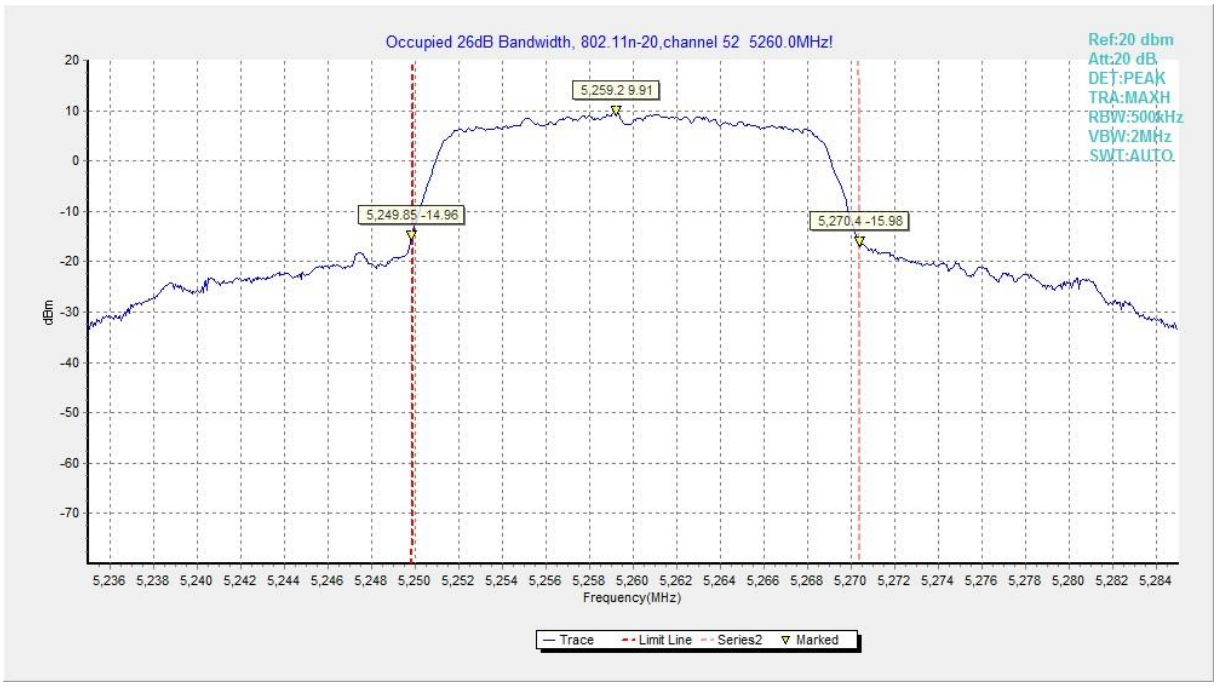


Fig. 13 Occupied 26dB Bandwidth (802.11n-HT20, 5260MHz)

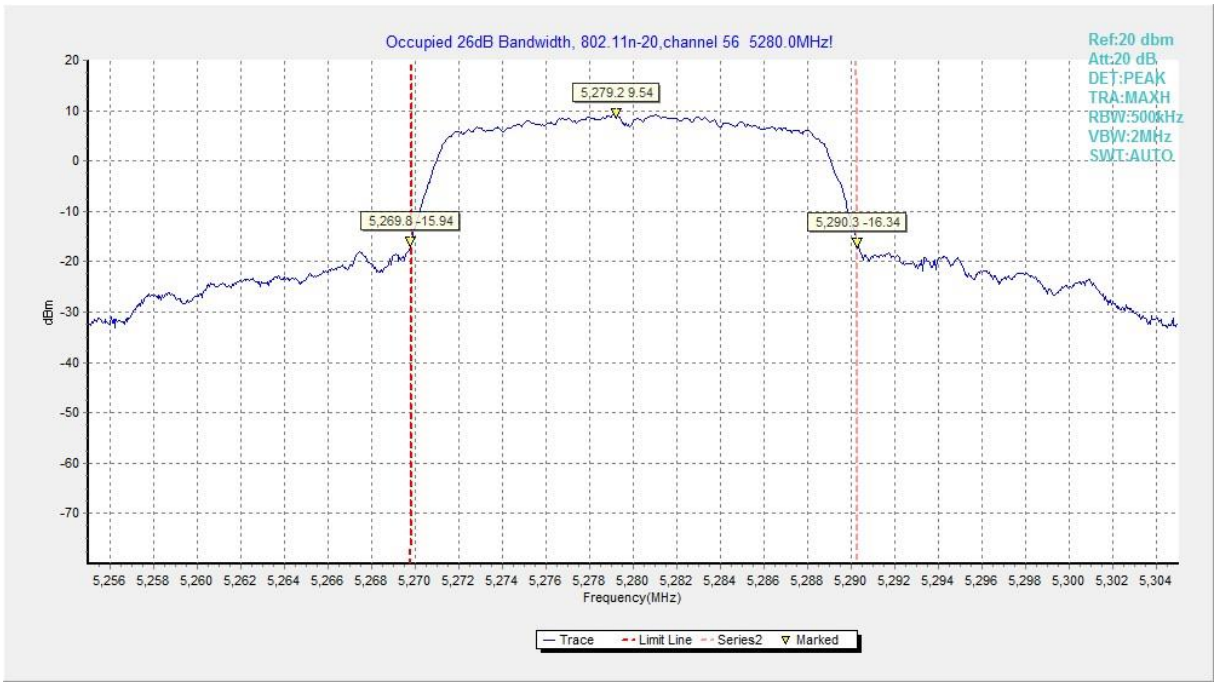


Fig. 14 Occupied 26dB Bandwidth (802.11n-HT20, 5280MHz)

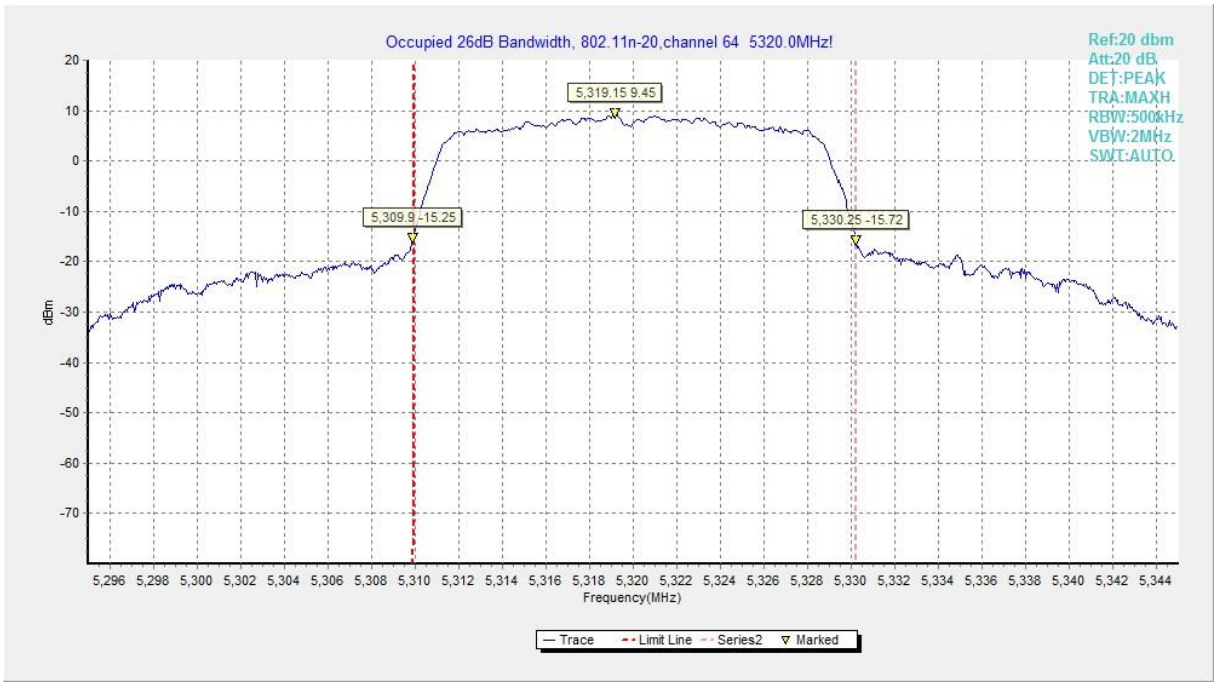


Fig. 15 Occupied 26dB Bandwidth (802.11n-HT20, 5320MHz)

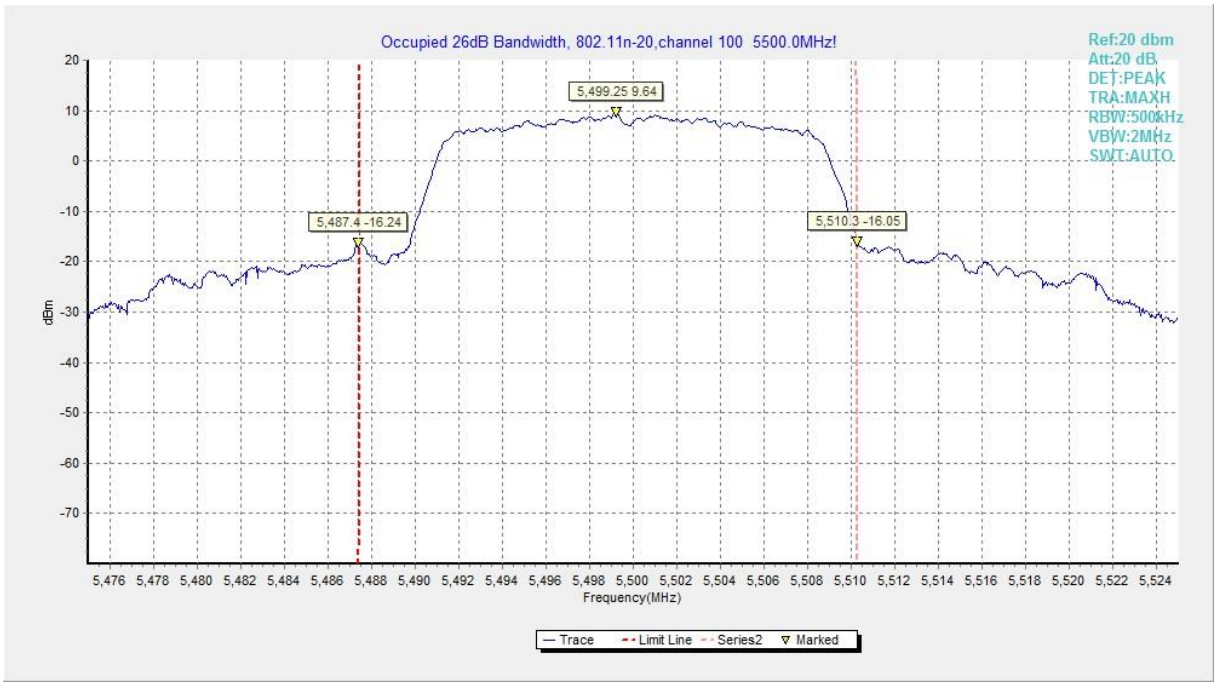


Fig. 16 Occupied 26dB Bandwidth (802.11n-HT20, 5500MHz)

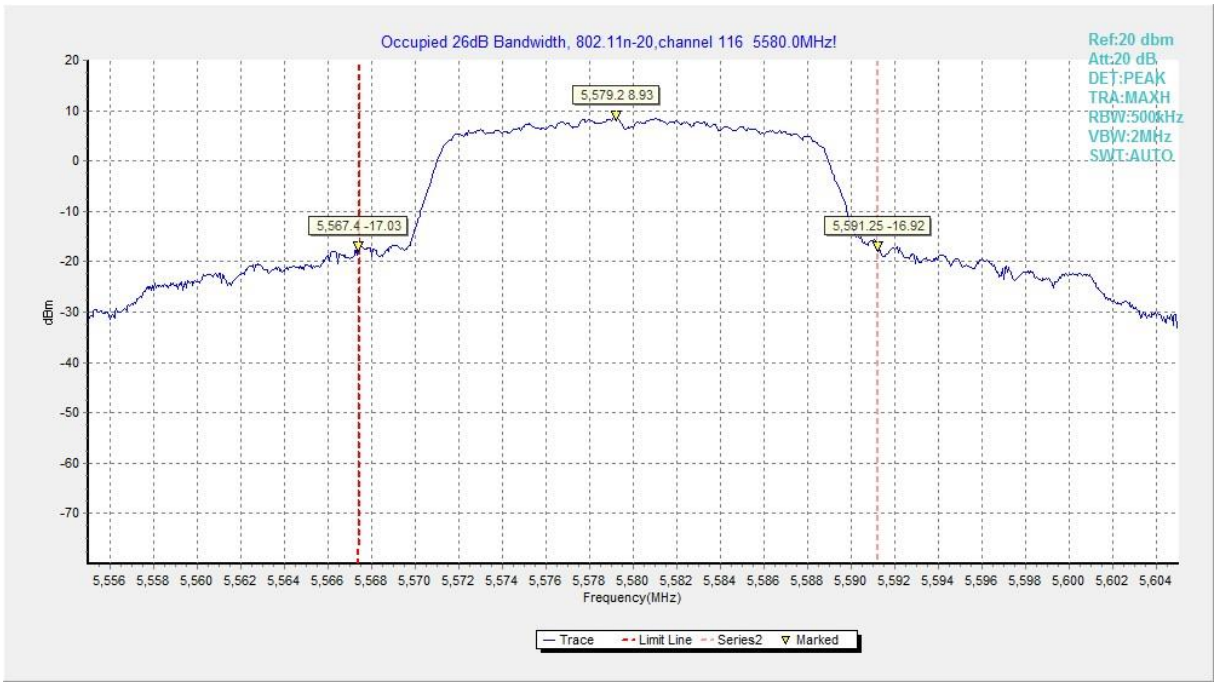


Fig. 17 Occupied 26dB Bandwidth (802.11n-HT20, 5580MHz)

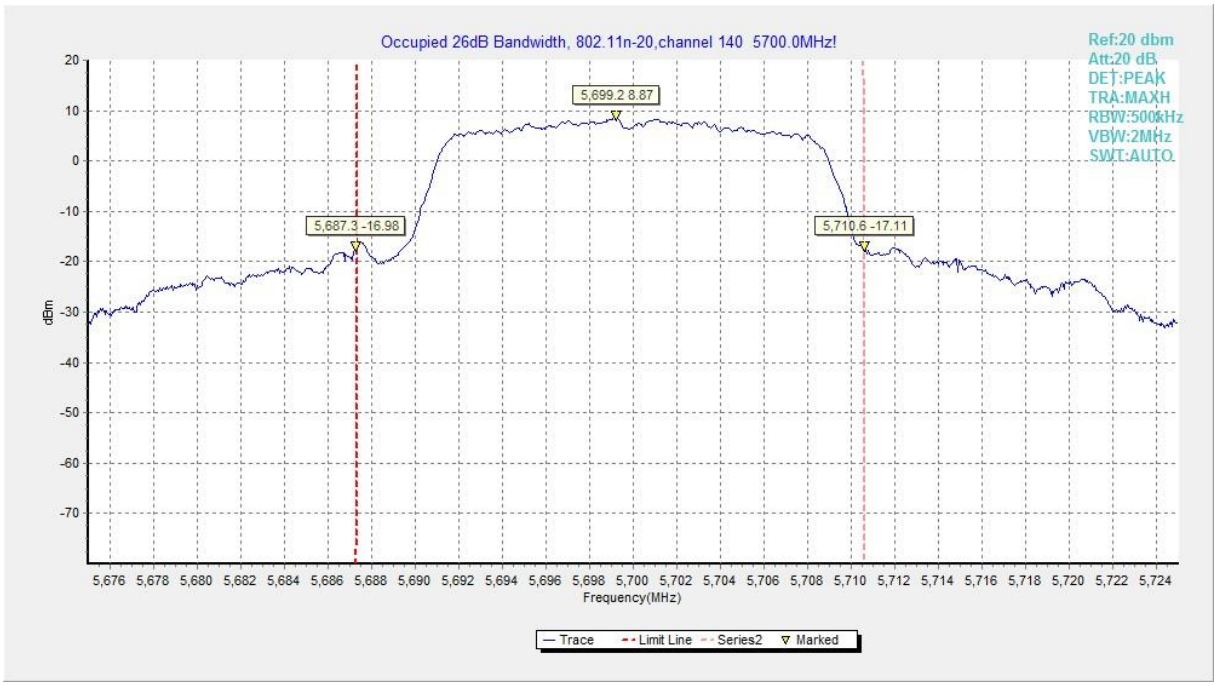


Fig. 18 Occupied 26dB Bandwidth (802.11n-HT20, 5700MHz)

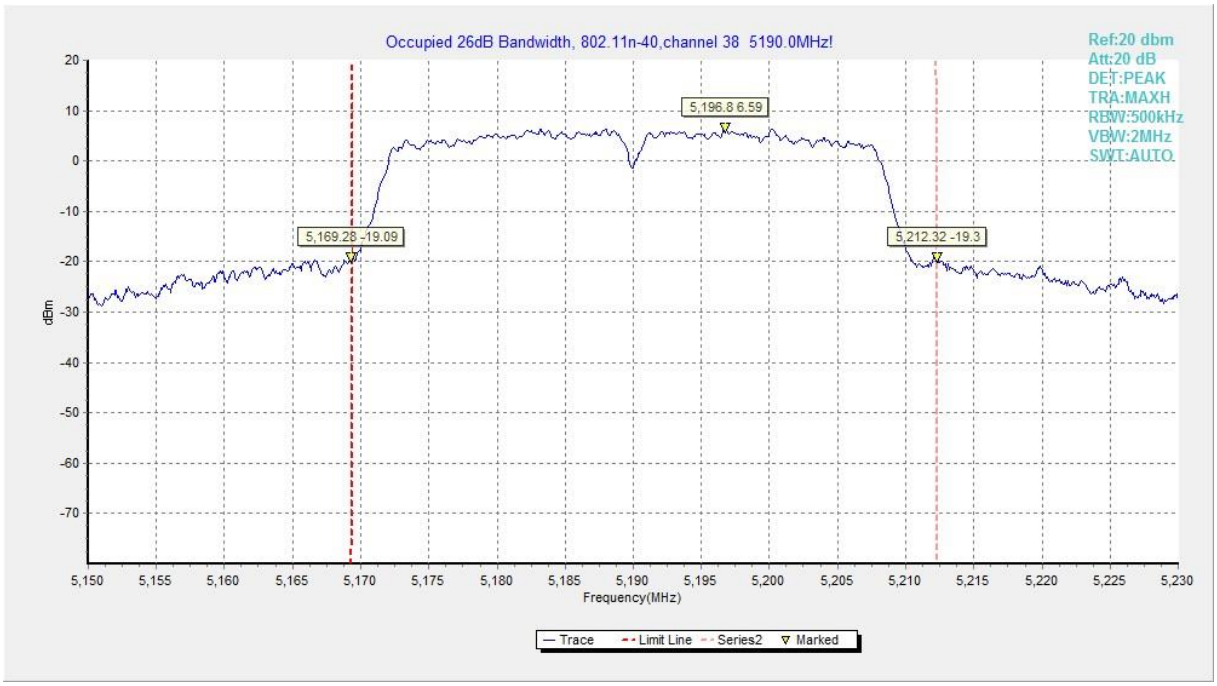


Fig. 19 Occupied 26dB Bandwidth (802.11n-HT40, 5190MHz)

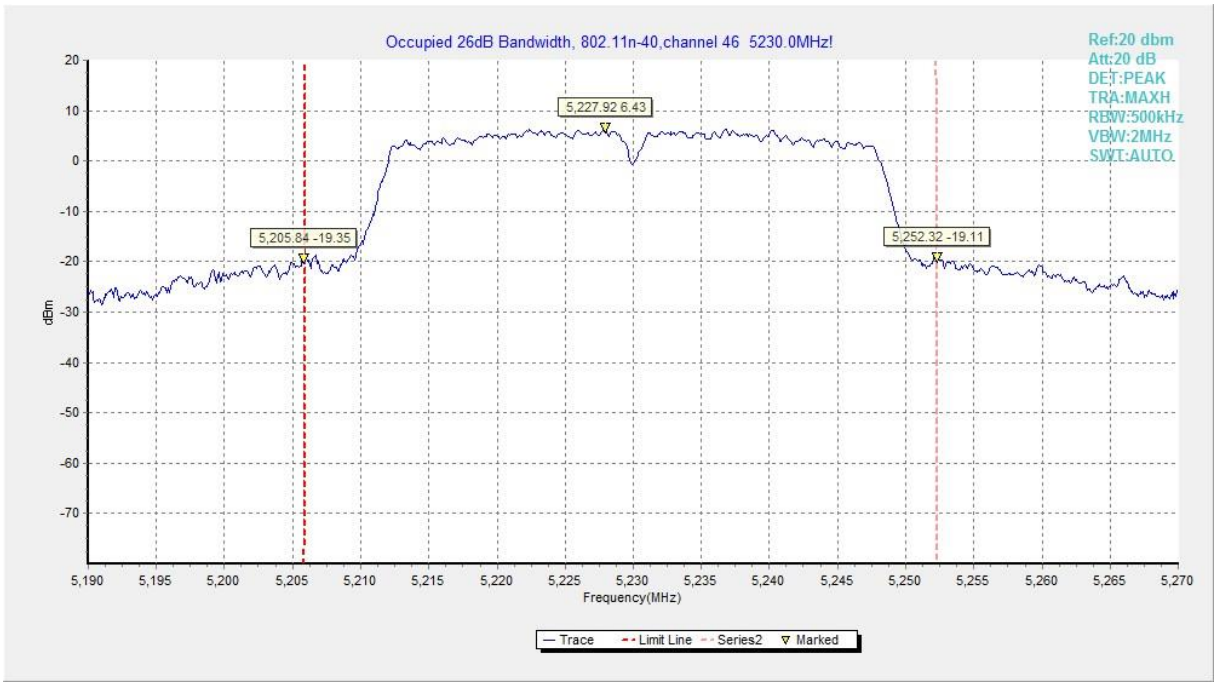


Fig. 20 Occupied 26dB Bandwidth (802.11n-HT40, 5230MHz)

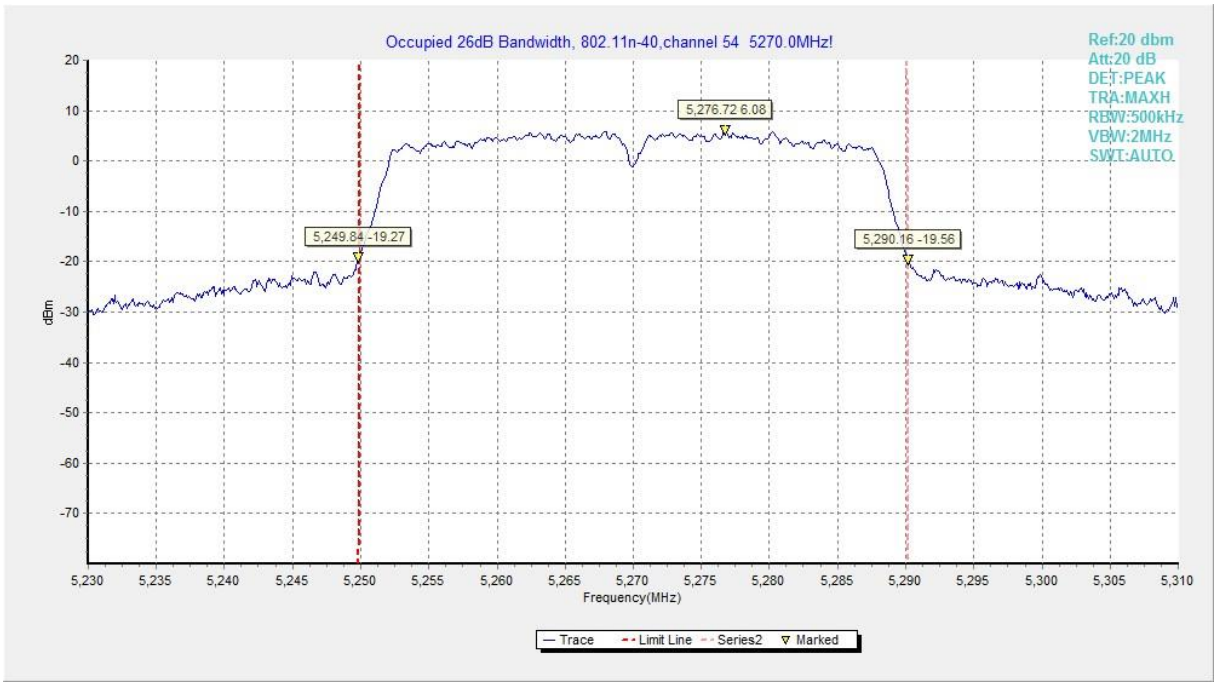


Fig. 21 Occupied 26dB Bandwidth (802.11n-HT40, 5270MHz)

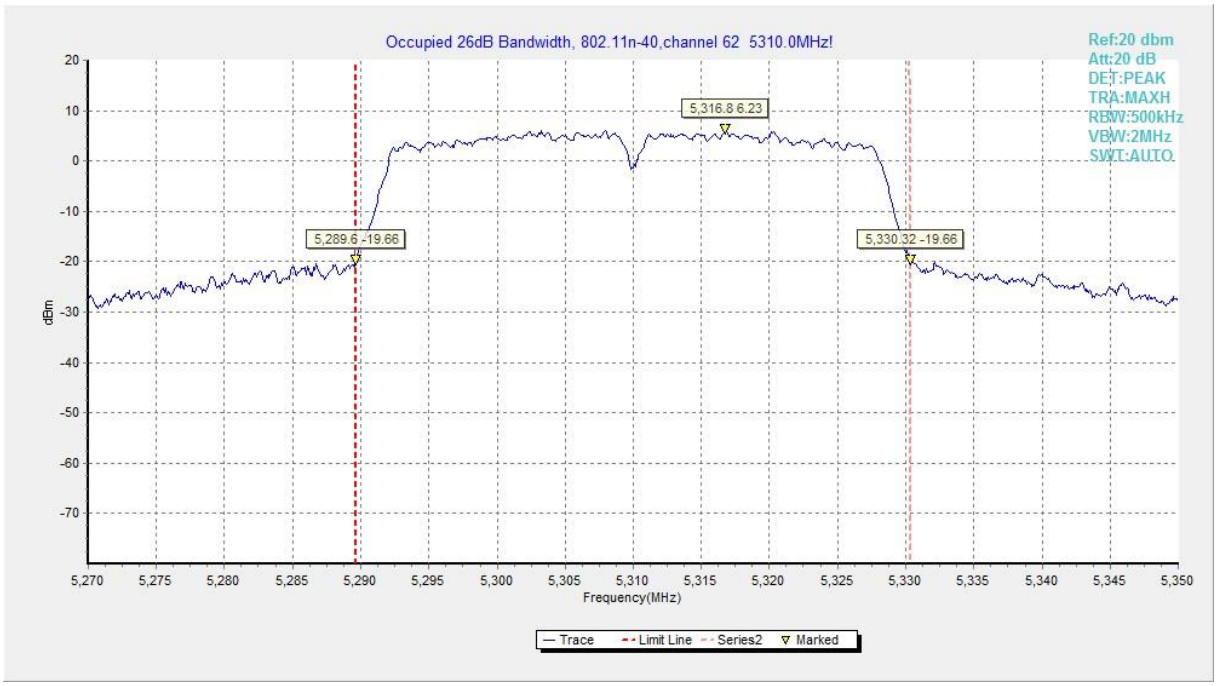


Fig. 22 Occupied 26dB Bandwidth (802.11n-HT40, 5310MHz)

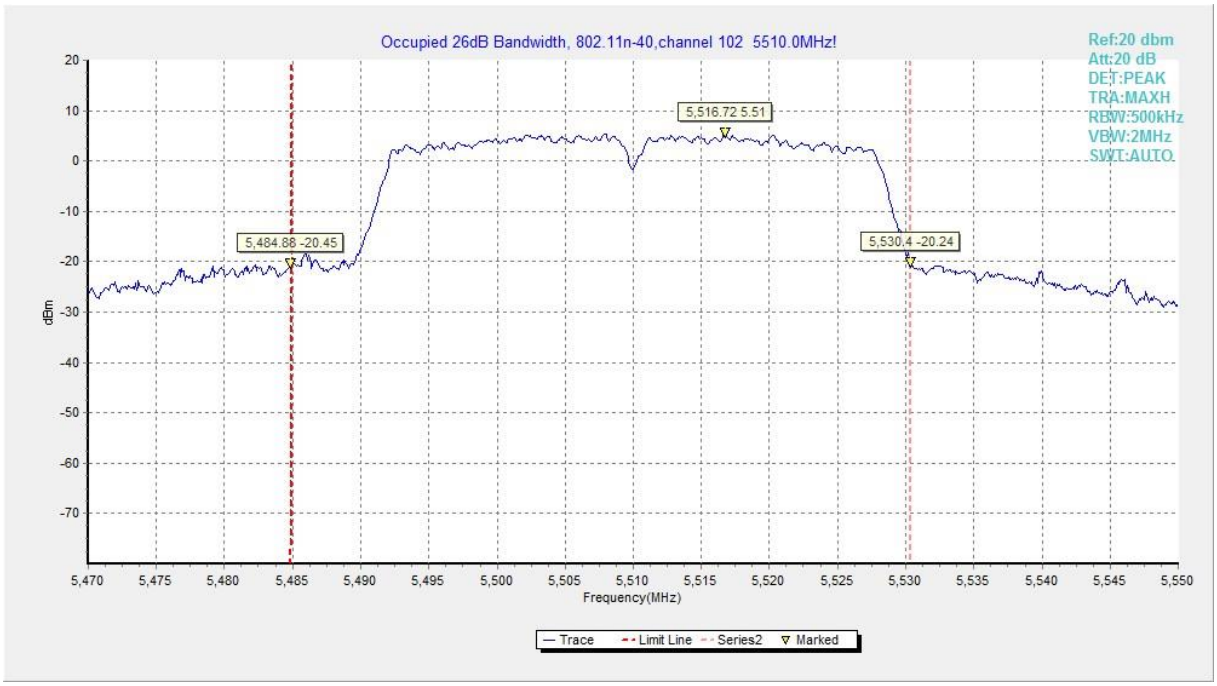


Fig. 23 Occupied 26dB Bandwidth (802.11n-HT40, 5510MHz)

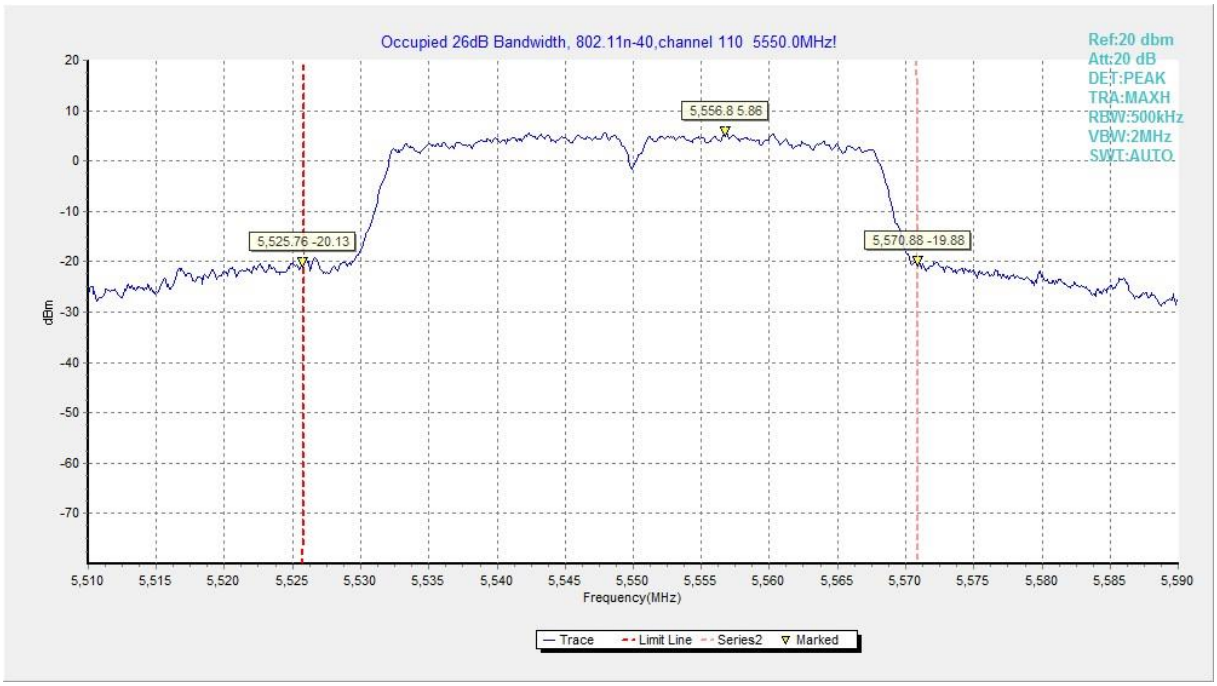


Fig. 24 Occupied 26dB Bandwidth (802.11n-HT40, 5550MHz)

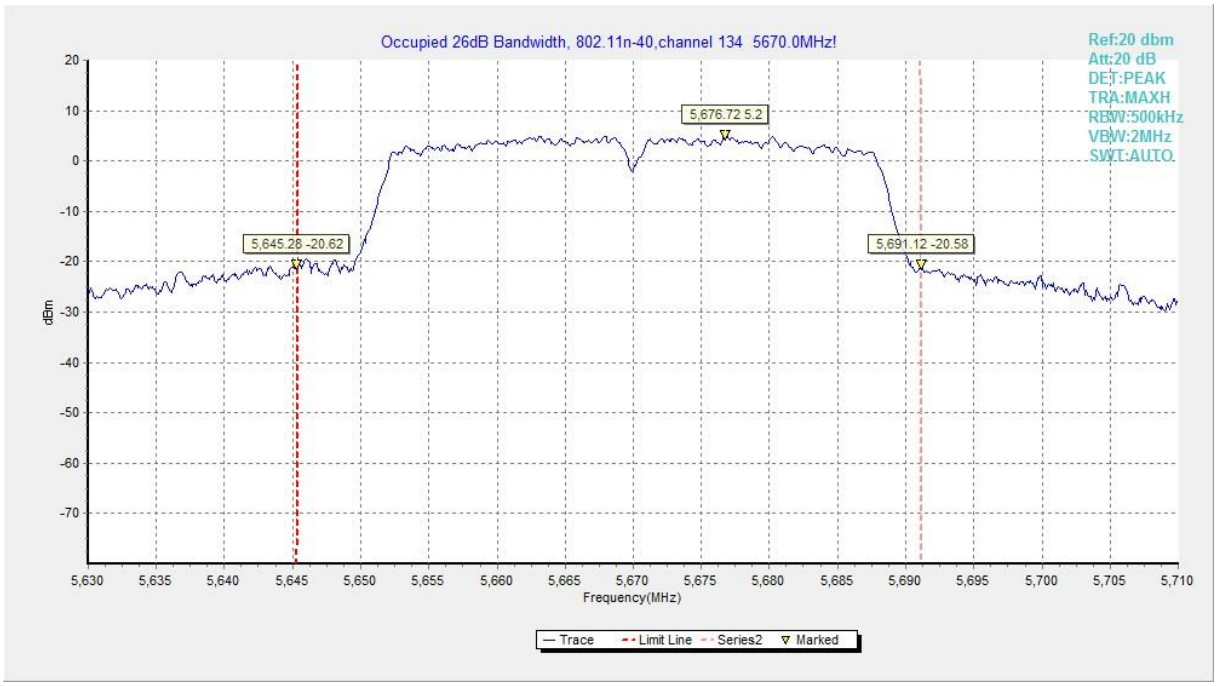


Fig. 25 Occupied 26dB Bandwidth (802.11n-HT40, 5700MHz))

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 Uncertainty:

Measurement Uncertainty	0.75dB

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.26	P
	5320 MHz	Fig.27	P
	5500 MHz	Fig.28	P
	5700 MHz	Fig.29	P
802.11n HT20	5180 MHz	Fig.30	P
	5320 MHz	Fig.31	P
	5500 MHz	Fig.32	P
	5700 MHz	Fig.33	P

802.11n HT40	5190 MHz	Fig.34	P
	5310 MHz	Fig.35	P
	5510 MHz	Fig.36	P
	5670 MHz	Fig.37	P

Conclusion: PASS

Test graphs as below:

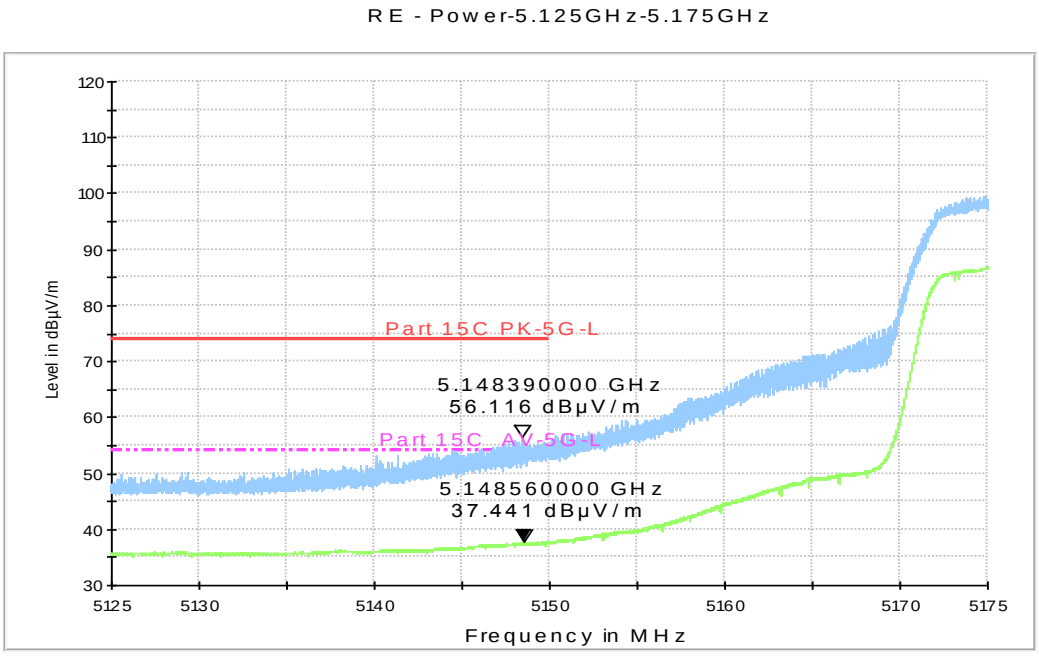


Fig. 26 Band Edges (802.11a, 5180MHz)

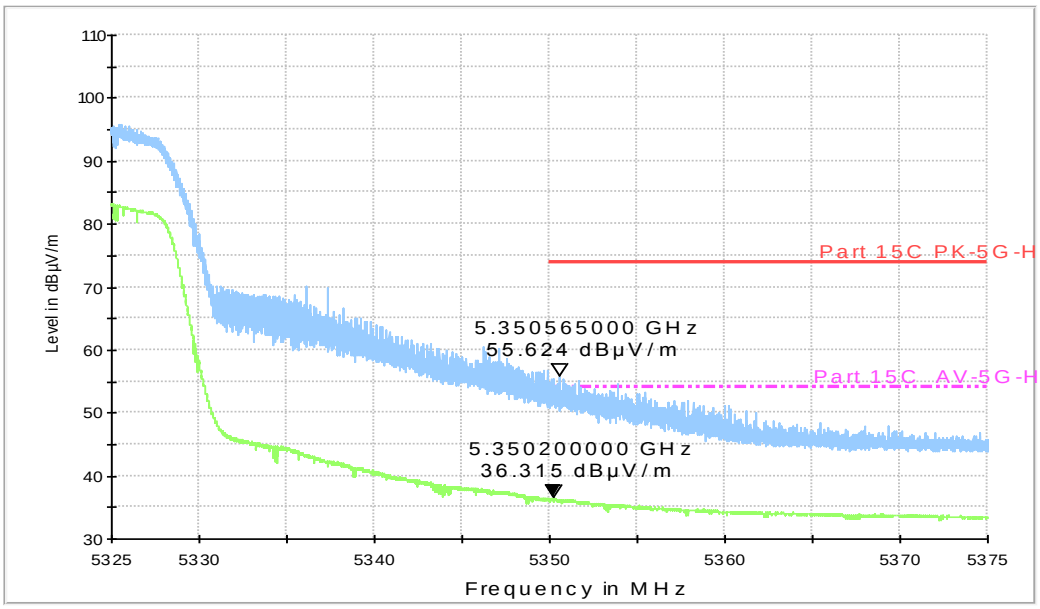


Fig. 27 Band Edges (802.11a, 5320MHz)

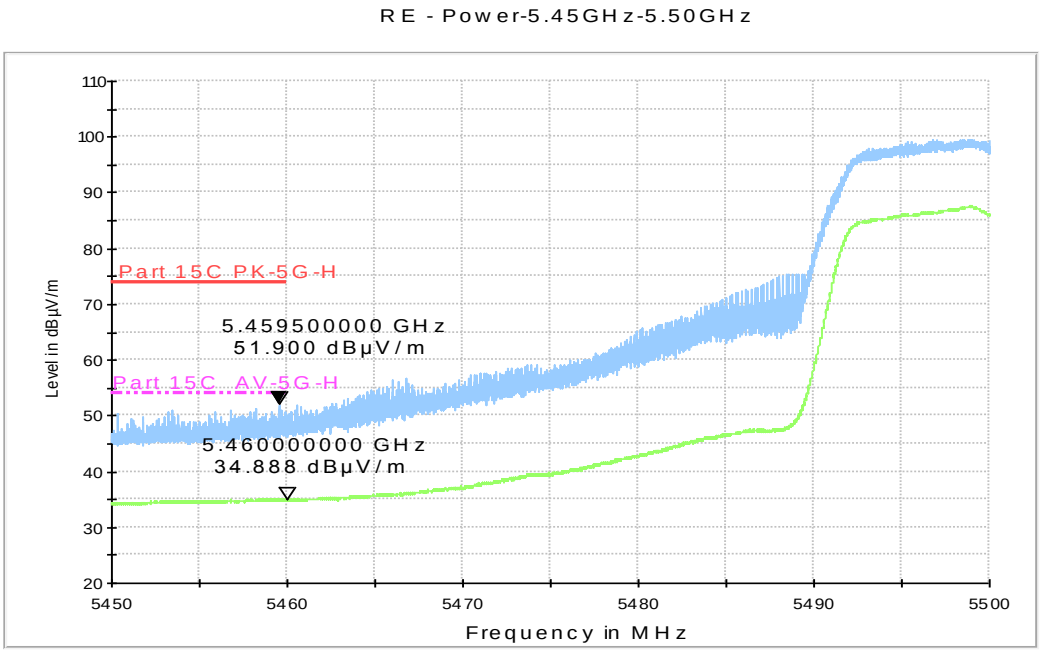


Fig. 28 Band Edges (802.11a, 5500MHz)

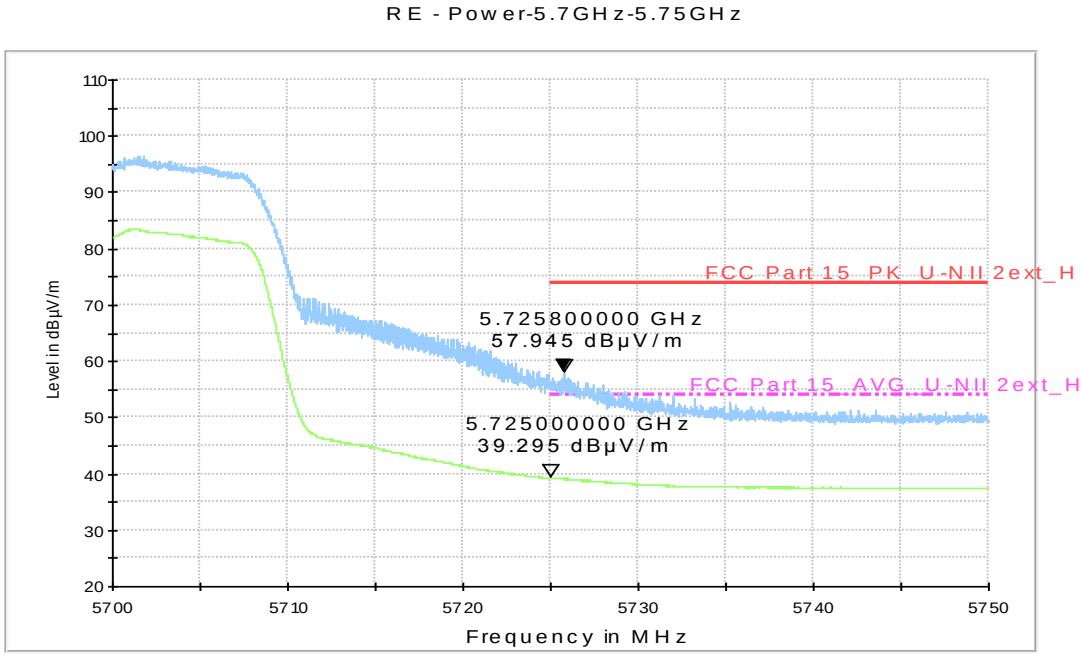


Fig. 29 Band Edges (802.11a, 5700MHz)

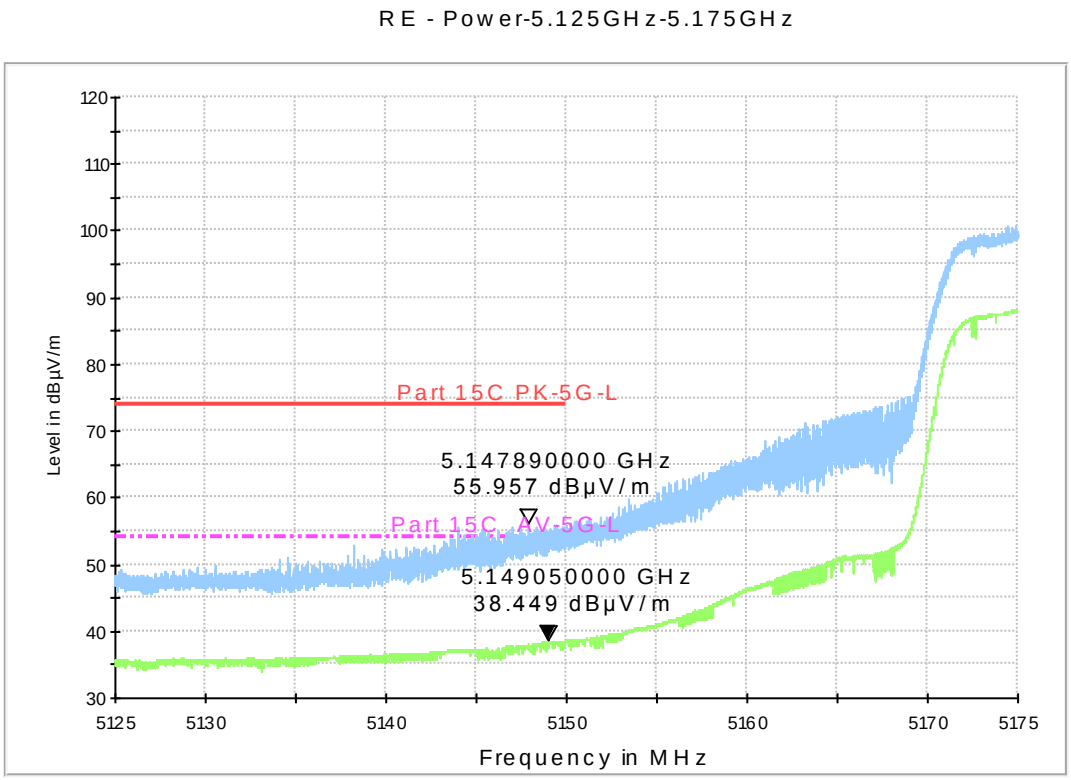


Fig. 30 Band Edges (802.11n-HT20, 5180MHz)

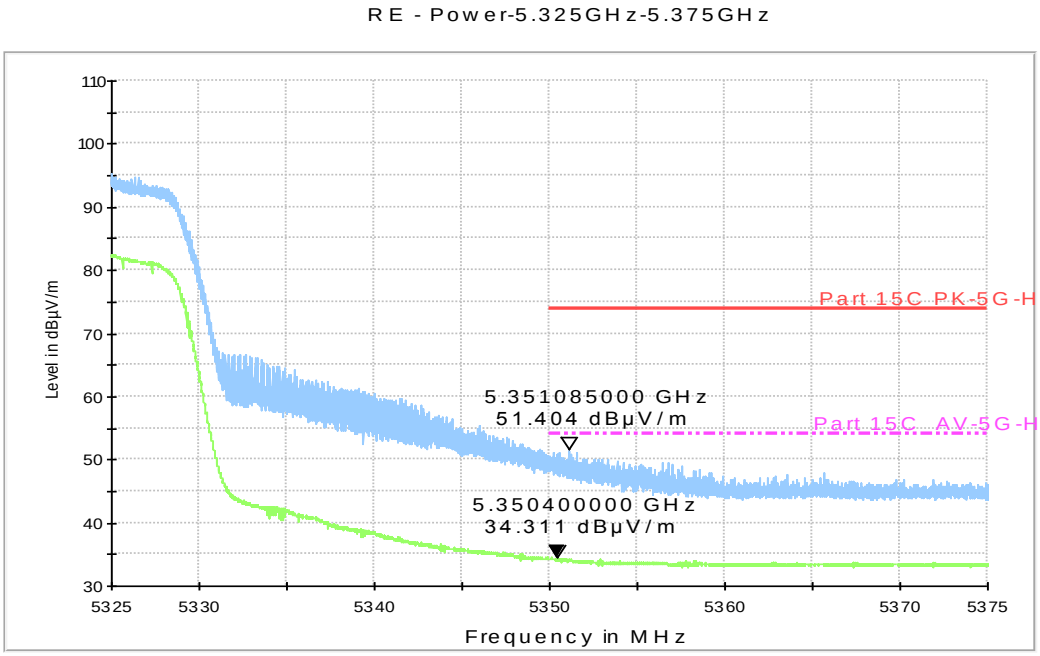


Fig. 31 Band Edges (802.11n-HT20, 5320MHz)

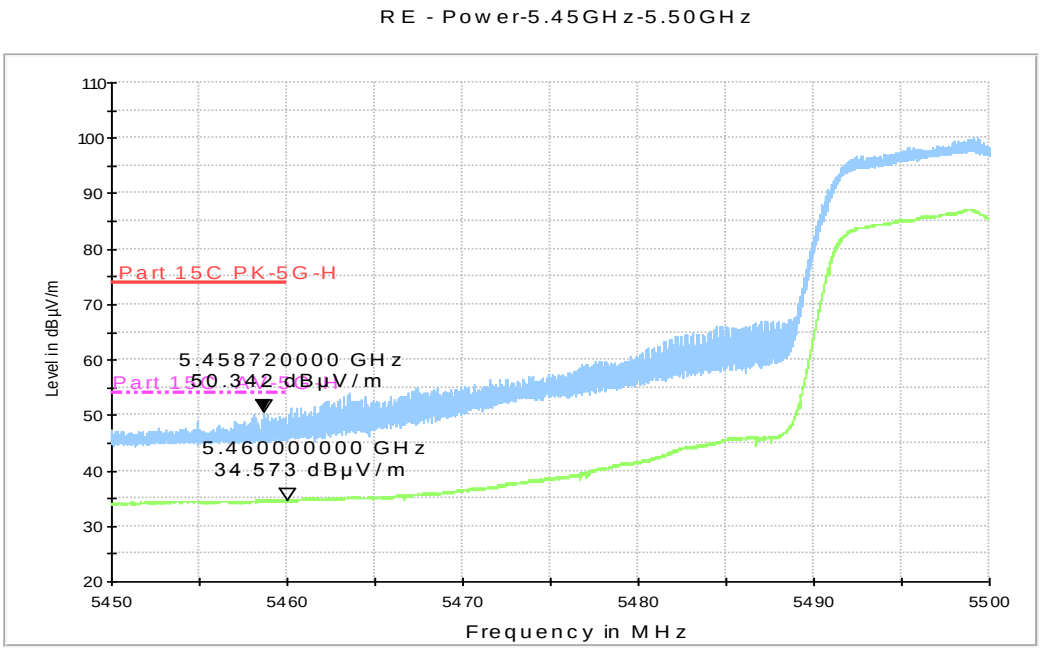


Fig. 32 Band Edges (802.11n-HT20, 5500MHz)

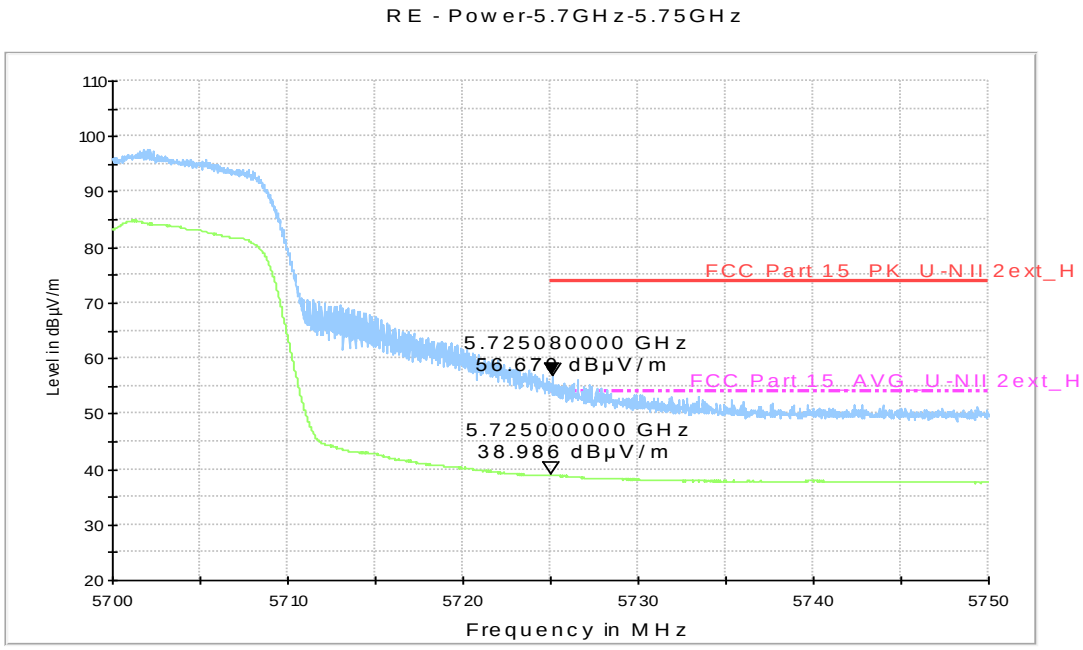


Fig. 33 Band Edges (802.11n-HT20, 5700MHz)

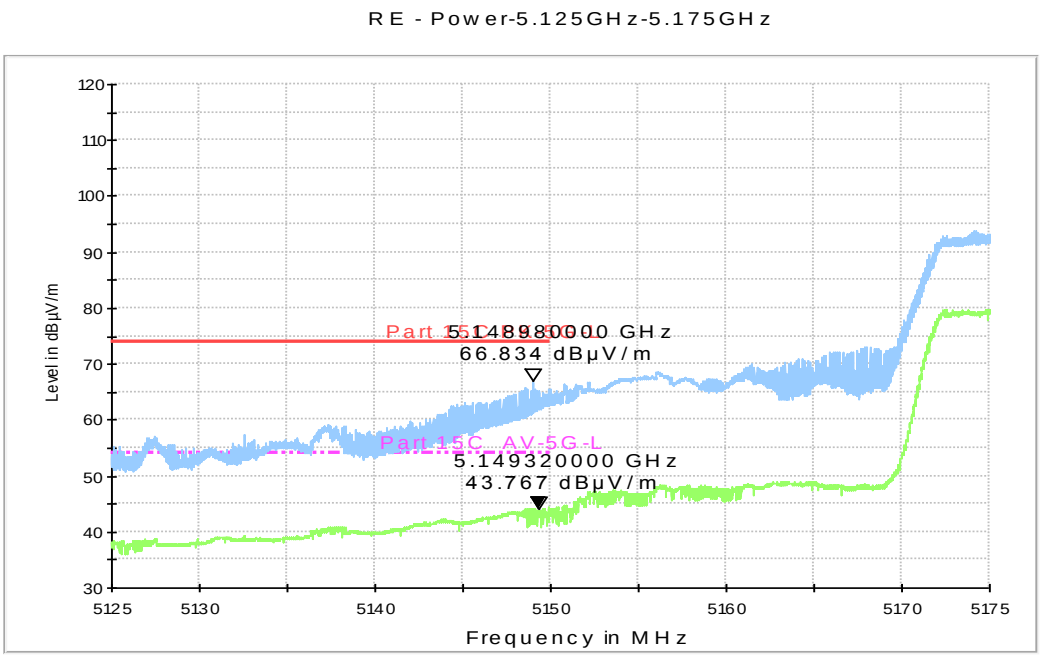


Fig. 34 Band Edges (802.11n-HT40, 5190MHz)

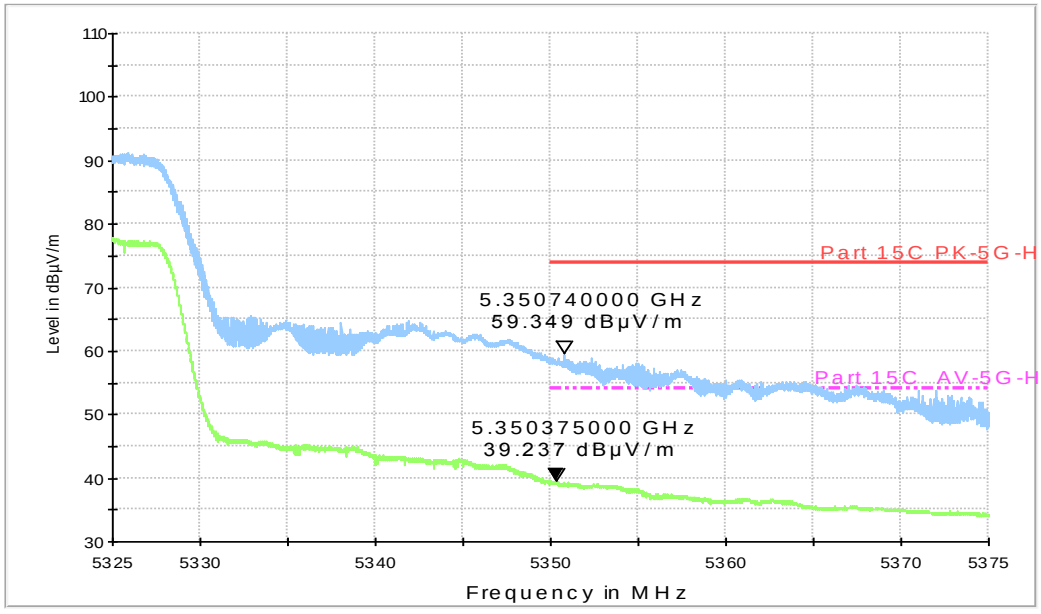


Fig. 35 Band Edges (802.11n-HT40, 5310MHz)

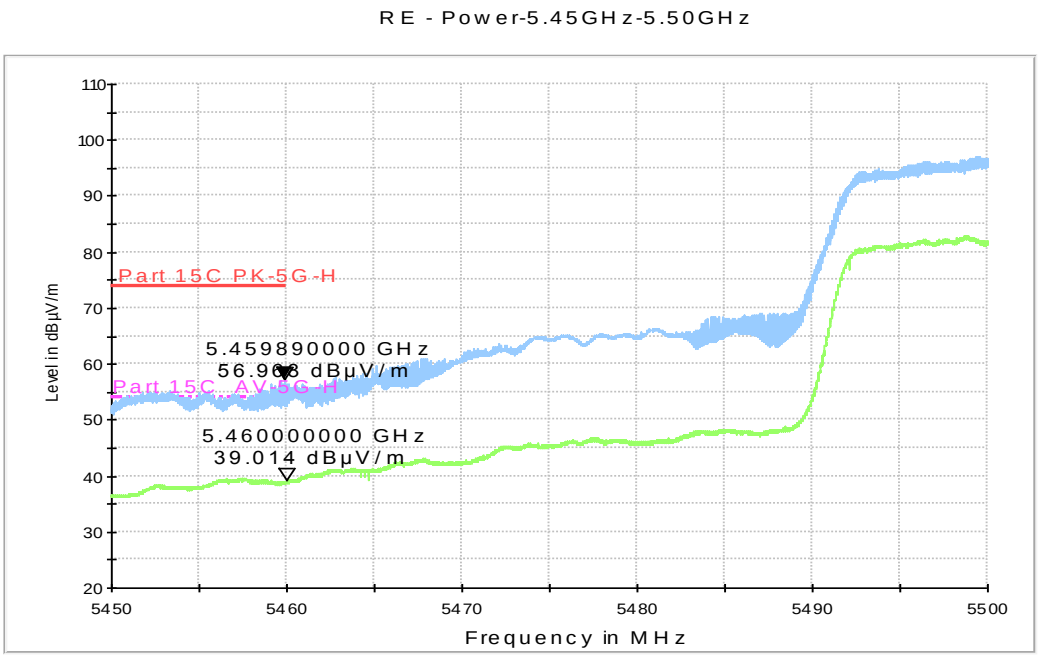


Fig. 36 Band Edges (802.11n-HT40, 5510MHz)

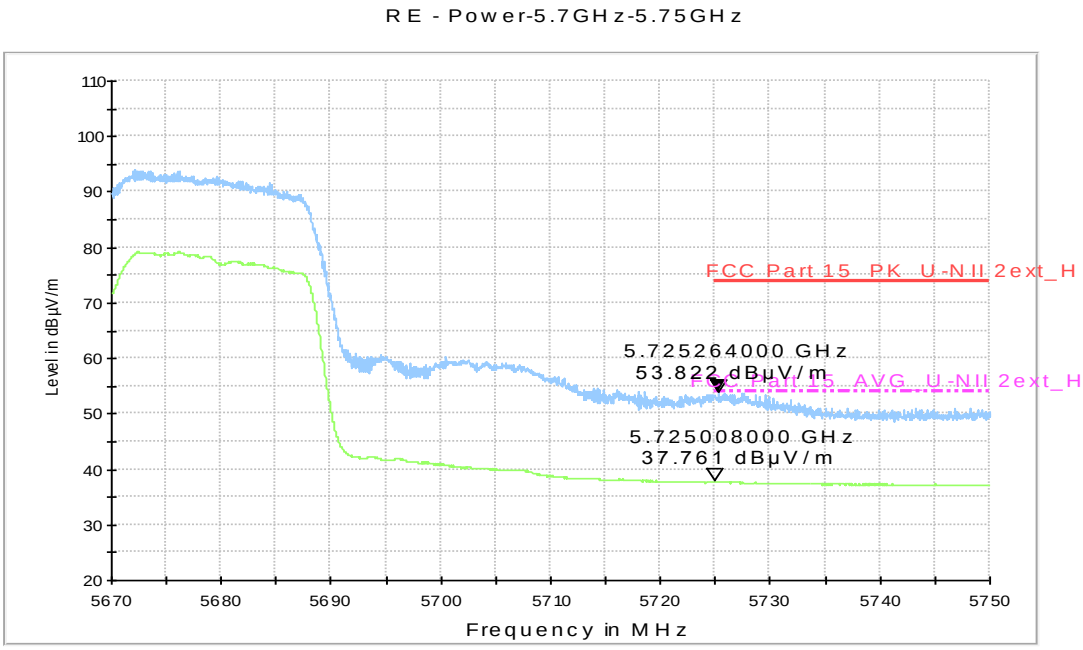


Fig. 37 Band Edges (802.11n-HT40, 5670MHz)

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(dBμV/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 uncertainty:

Max expanded measurement uncertainty for this test item is U =5.28 dB, k=2.

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 gain of receive antenna, the gain of the preamplifier, the cable loss.

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

The measurement results are obtained as described below:

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

Average

82.11a

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5137.200	36.7	-32.3	34.1	34.92	H
5148.420	37.0	-32.2	34.2	35.01	H
10360.500	31.8	-30.9	37.6	25.10	V
15540.400	37.2	-25.7	40.3	22.56	H
17653.500	37.9	-25.3	41.5	21.66	V
17958.200	38.1	-25.2	41.4	21.81	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5142.820	36.7	-32.3	34.1	34.79	H
5293.450	37.1	-31.9	34.3	34.72	H
10400.100	31.9	-31.0	37.6	25.23	H
15599.800	37.0	-25.9	40.4	22.54	V
17657.900	37.8	-25.3	41.5	21.60	V
17954.900	38.1	-25.2	41.4	21.87	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5139.410	36.9	-32.3	34.1	35.01	V
5290.840	37.3	-31.9	34.3	34.93	H
10480.400	31.7	-30.9	37.7	24.86	V
15719.700	36.3	-25.8	40.6	21.55	H
17627.100	37.7	-25.2	41.5	21.44	H
17950.500	38.0	-25.2	41.4	21.76	V

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5230.000	37.5	-31.9	34.2	35.16	H
5289.600	37.8	-31.9	34.3	35.42	V
10520.000	32.8	-30.8	37.7	25.83	H
15780.000	37.2	-25.6	40.6	22.13	V
17953.820	38.1	-25.2	41.4	21.91	V
15532.740	36.9	-25.7	40.3	22.24	V

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5247.200	37.0	-31.9	34.3	34.62	H
5316.400	37.1	-31.8	34.3	34.59	H
10560.000	33.6	-30.5	37.7	26.43	H
15840.000	37.3	-25.6	40.7	22.22	V
16379.740	37.5	-25.7	41.4	21.82	H
17626.350	37.9	-25.2	41.5	21.61	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5352.520	37.2	-31.6	34.4	34.50	H
5366.680	36.9	-31.5	34.4	34.07	H
10640.000	32.8	-30.2	37.8	25.32	H
15960.000	37.4	-26.1	40.9	22.63	V
15600.940	36.9	-25.9	40.4	22.41	H
17049.630	37.8	-26.0	41.8	22.10	H

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5458.000	37.8	-31.4	34.5	34.70	H
5460.000	37.7	-31.4	34.5	34.63	H
10999.600	32.9	-31.0	37.9	26.02	H
16499.600	37.6	-25.8	41.5	21.92	H
17649.100	38.1	-25.2	41.5	21.92	H
17946.100	38.4	-25.2	41.4	22.25	V

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5540.800	36.7	-31.7	34.6	33.89	H
5680.400	36.9	-32.1	34.8	34.29	H
11199.800	33.5	-30.4	38.0	25.92	V
16799.900	37.8	-25.9	41.7	22.06	V
17626.000	38.2	-25.2	41.5	21.92	H
17951.600	38.4	-25.2	41.4	22.21	H

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5725.200	37.6	-32.8	34.8	35.53	H
5726.400	37.4	-32.8	34.8	35.41	H
11400.000	33.5	-30.7	38.1	26.03	V
17100.200	37.8	-26.2	41.7	22.22	H
17650.200	38.1	-25.3	41.5	21.92	V
17953.800	38.4	-25.2	41.4	22.20	H

802.11n-HT20

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5134.860	37.2	-32.3	34.1	35.43	H
5141.950	38.0	-32.3	34.1	36.16	H
10360.500	31.9	-30.9	37.6	25.19	V
15540.400	37.2	-25.7	40.3	22.56	H
17648.000	37.7	-25.2	41.5	21.49	V
17954.900	38.2	-25.2	41.4	21.95	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5141.640	37.5	-32.3	34.1	35.58	H
5294.680	37.3	-31.9	34.3	34.92	H
10400.100	31.8	-31.0	37.6	25.20	H
15599.800	36.9	-25.9	40.4	22.45	V
17624.900	37.8	-25.2	41.5	21.56	V
17958.200	38.1	-25.2	41.4	21.84	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5148.738	38.2	-32.2	34.2	36.27	V
5291.470	37.2	-31.9	34.3	34.84	H
10480.000	32.3	-30.9	37.7	25.49	V
15720.000	36.6	-25.8	40.6	21.86	H
16949.500	37.7	-25.8	41.8	21.74	H
17653.500	37.8	-25.3	41.5	21.63	V

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5235.200	37.0	-31.9	34.2	34.65	H
5284.000	37.2	-31.9	34.3	34.85	V
10520.000	32.7	-30.8	37.7	25.82	H
15780.000	37.9	-25.6	40.6	22.81	V
16946.230	37.8	-25.8	41.8	21.80	V
17616.120	37.9	-25.2	41.5	21.65	V

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5254.400	37.2	-31.9	34.3	34.85	H
5307.200	37.1	-31.8	34.3	34.59	H
10560.000	32.7	-30.5	37.7	25.46	H
15840.000	37.0	-25.6	40.7	21.87	V
16589.950	37.0	-25.8	41.6	21.30	H
16946.280	37.9	-25.8	41.8	21.89	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5277.280	36.9	-31.9	34.3	34.57	H
5333.690	37.2	-31.7	34.3	34.55	H
10640.000	32.4	-30.2	37.8	24.87	H
15960.000	36.9	-26.1	40.9	22.07	H
16942.950	37.9	-25.8	41.8	21.89	H
17626.380	38.0	-25.2	41.5	21.71	V

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5453.600	36.9	-31.3	34.5	33.81	H
5458.800	36.9	-31.4	34.5	33.86	H
10999.600	33.0	-31.0	37.9	26.07	V
16499.600	37.7	-25.8	41.5	22.00	V
17641.400	38.1	-25.2	41.5	21.80	H
17947.200	38.5	-25.2	41.4	22.28	H

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5572.000	37.2	-31.8	34.6	34.41	H
5643.600	37.1	-32.1	34.7	34.45	H
11199.800	33.5	-30.4	38.0	25.90	V
16799.900	37.8	-25.9	41.7	22.04	H
17638.100	38.2	-25.2	41.5	21.93	V
17953.800	38.6	-25.2	41.4	22.34	H

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5725.200	37.3	-32.8	34.8	35.28	H
5726.400	37.2	-32.8	34.8	35.18	H
11400.000	33.5	-30.7	38.1	26.04	V
17100.200	37.7	-26.2	41.7	22.16	H
17657.900	38.3	-25.3	41.5	22.10	V
17953.800	38.5	-25.2	41.4	22.29	H

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Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5148.020	38.2	-32.2	34.2	36.24	V
5142.840	38.4	-32.3	34.1	36.54	H
10380.000	33.0	-30.9	37.6	26.32	V
15570.000	36.6	-25.8	40.4	22.09	H
16193.840	37.3	-25.7	41.1	21.87	H
17052.920	37.7	-26.0	41.8	21.99	V

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5138.830	37.6	-32.3	34.1	35.80	H
5291.450	37.4	-31.9	34.3	35.05	V
10460.000	32.3	-30.9	37.7	25.54	H
15690.000	36.4	-25.9	40.5	21.83	V
16386.340	37.5	-25.7	41.4	21.84	V
17941.740	38.1	-25.3	41.4	21.93	V

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5202.400	37.1	-31.9	34.2	34.76	H
5345.200	37.0	-31.7	34.4	34.27	H
10540.000	32.4	-30.6	37.7	25.37	H
15810.000	37.2	-25.5	40.7	21.95	V
16939.620	37.9	-25.8	41.8	21.96	H
17659.080	38.0	-25.3	41.5	21.78	H

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5364.850	37.1	-31.5	34.4	34.25	H
5358.920	37.2	-31.6	34.4	34.43	H
10620.000	32.6	-30.1	37.7	24.95	H
15930.000	36.6	-25.9	40.8	21.74	H
16388.590	37.6	-25.7	41.4	21.96	H
17953.860	38.3	-25.2	41.4	22.08	V

Channel 102

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5452.400	37.3	-31.3	34.5	34.21	H
5457.200	37.4	-31.4	34.5	34.32	H
11020.500	33.2	-31.0	37.9	26.30	V
16530.400	37.7	-25.8	41.5	21.95	V
17650.200	38.2	-25.3	41.5	21.97	H
17953.800	38.5	-25.2	41.4	22.28	H

Channel 118

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5526.400	36.7	-31.7	34.5	33.84	H
5639.200	37.4	-32.1	34.7	34.73	H
11800.400	33.6	-30.4	38.6	25.38	V
16770.200	37.6	-26.0	41.7	21.94	H
17650.200	38.2	-25.3	41.5	21.97	V
17969.200	38.4	-25.1	41.4	22.13	H

Channel 134

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5726.400	36.8	-32.8	34.8	34.79	H
5727.600	36.8	-32.8	34.8	34.77	H
11339.500	33.5	-30.6	38.1	26.00	V
17010.000	38.1	-25.9	41.8	22.28	H
17681.000	38.1	-25.4	41.5	22.01	V
17953.800	38.6	-25.2	41.4	22.35	H

Peak

802.11a

Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5148.390	56.1	-32.2	34.2	54.17	H
5147.850	55.7	-32.2	34.2	53.77	H
10359.950	47.9	-30.9	37.6	41.25	H
15542.050	54.8	-25.8	40.4	40.17	V
17077.102	55.5	-26.1	41.8	39.88	H
17426.350	55.0	-26.0	41.5	39.41	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5162.340	44.8	-32.1	34.2	42.75	H
5279.850	44.6	-31.9	34.3	42.28	H
10400.100	43.9	-31.0	37.6	37.25	H
15599.800	54.7	-25.9	40.4	40.22	H
17645.800	55.1	-25.2	41.5	38.87	H
17976.350	54.9	-25.0	41.4	38.53	V

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5202.340	46.3	-31.9	34.2	43.99	H
5575.860	45.5	-31.8	34.6	42.76	H
10479.850	45.7	-30.9	37.7	38.88	V
15720.250	54.2	-25.8	40.6	39.42	V
17572.100	55.0	-25.4	41.5	38.95	H
17957.650	55.2	-25.2	41.4	38.93	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5170.800	45.1	-32.0	34.2	42.86	H
5333.400	44.9	-31.7	34.3	42.26	H
10520.000	47.4	-30.8	37.7	40.47	V
15780.000	60.5	-25.6	40.6	45.39	H
16947.305	54.9	-25.8	41.8	38.91	V
17572.106	55.6	-25.4	41.5	39.57	H

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5217.400	45.6	-31.9	34.2	43.26	H
5363.200	45.1	-31.5	34.4	42.30	H
10560.000	47.4	-30.5	37.7	40.21	V
15840.000	56.0	-25.6	40.7	40.92	H
17985.515	56.7	-25.0	41.4	40.28	V
17561.105	55.3	-25.5	41.5	39.27	H

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5351.625	55.1	-31.6	34.4	52.32	V
5350.565	55.6	-31.6	34.4	52.90	H
10640.000	48.5	-30.2	37.8	40.94	V
15960.000	56.8	-26.1	40.9	42.02	H
17498.950	55.2	-25.7	41.5	39.43	H
17656.830	55.3	-25.3	41.5	39.07	V

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5458.245	51.2	-31.4	34.5	48.08	H
5459.500	51.9	-31.4	34.5	48.83	V
11000.150	45.4	-31.0	37.9	38.52	H
16500.150	52.4	-25.8	41.5	36.67	V
17495.650	55.8	-25.8	41.5	40.06	V
17604.000	55.8	-25.3	41.5	39.63	V

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5536.600	45.6	-31.7	34.6	42.75	H
5677.600	44.9	-32.1	34.8	42.28	H
11199.800	46.6	-30.4	38.0	39.04	H
16799.900	51.9	-25.9	41.7	36.11	H
16882.950	55.4	-25.9	41.7	39.51	H
17943.350	55.8	-25.2	41.4	39.63	V

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5725.800	57.9	-32.8	34.8	55.90	H
5726.160	56.9	-32.8	34.8	54.82	H
11400.000	46.9	-30.7	38.1	39.45	V
17100.200	52.7	-26.2	41.7	37.15	V
17357.600	54.8	-26.1	41.6	39.25	H
17883.400	55.6	-25.6	41.4	39.81	H

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Channel 36

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5143.950	55.4	-32.2	34.1	53.54	H
5147.890	56.0	-32.2	34.2	54.01	H
10360.000	47.3	-30.9	37.6	40.64	V
15540.950	55.6	-25.7	40.3	41.04	H
16894.520	55.7	-25.8	41.7	39.77	V
17668.902	55.8	-25.3	41.5	39.70	H

Channel 40

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5166.230	46.9	-32.0	34.2	44.73	H
5240.830	45.9	-31.9	34.2	43.56	H
10400.100	44.8	-31.0	37.6	38.17	V
15592.650	53.5	-25.9	40.4	38.98	H
17287.200	55.5	-26.2	41.6	40.07	V
17969.750	55.4	-25.1	41.4	39.06	H

Channel 48

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5192.460	46.3	-31.8	34.2	43.97	H
5329.640	47.2	-31.7	34.3	44.62	H
10480.000	47.3	-30.9	37.7	40.52	H
15720.000	55.0	-25.8	40.6	40.25	V
15717.500	55.0	-25.8	40.6	40.26	V
16806.530	55.0	-25.9	41.7	39.23	H

Channel 52

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5206.200	45.7	-31.9	34.2	43.39	V
5299.800	45.7	-31.9	34.3	43.31	H
10520.000	47.6	-30.8	37.7	40.72	V
15780.000	57.4	-25.6	40.6	42.33	H
16595.850	55.0	-25.8	41.6	39.22	H
17441.750	54.7	-25.9	41.5	39.07	V

Channel 56

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5204.600	45.9	-31.9	34.2	43.59	H
5322.800	44.8	-31.8	34.3	42.21	V
10560.000	47.5	-30.5	37.7	40.26	H
15840.000	59.3	-25.6	40.7	44.17	V
17072.720	54.9	-26.1	41.8	39.20	V
17728.850	54.8	-25.6	41.5	38.99	V

Channel 64

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5351.620	50.8	-31.6	34.4	48.10	H
5351.850	51.4	-31.6	34.4	48.66	H
10640.000	48.0	-30.2	37.8	40.50	H
15960.000	54.8	-26.1	40.9	40.05	V
17297.150	55.2	-26.2	41.6	39.71	H
16915.400	55.1	-25.8	41.7	39.15	H

Channel 100

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5458.140	50.1	-31.4	34.5	46.98	H
5458.720	50.3	-31.4	34.5	47.26	H
11000.150	45.8	-31.0	37.9	38.87	H
16500.150	52.0	-25.8	41.5	36.26	H
17627.650	54.9	-25.2	41.5	38.60	H
17954.490	56.3	-25.2	41.4	40.08	V

Channel 120

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5555.600	46.2	-31.7	34.6	43.35	H
5658.800	46.2	-32.0	34.7	43.53	H
11199.800	46.5	-30.4	38.0	38.89	V
16799.900	52.7	-25.9	41.7	36.97	V
17613.900	55.8	-25.2	41.5	39.54	H
17974.150	55.2	-25.1	41.4	38.89	H

Channel 140

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5725.080	56.7	-32.8	34.8	54.62	H
5726.560	56.0	-32.8	34.8	53.97	H
11400.000	46.4	-30.7	38.1	38.98	V
17100.200	52.2	-26.2	41.7	36.62	H
17492.900	54.8	-25.8	41.5	39.10	V
17898.250	56.2	-25.5	41.4	40.31	H

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Channel 38

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5148.980	66.8	-32.2	34.2	64.88	H
5148.576	65.7	-32.2	34.2	63.76	H
10380.000	48.7	-30.9	37.6	41.99	V
15570.000	55.1	-25.8	40.4	40.51	H
16386.340	54.8	-25.7	41.4	39.12	V
17941.740	55.2	-25.3	41.4	39.05	H

Channel 46

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5147.260	50.2	-32.2	34.2	48.28	H
5331.460	46.9	-31.7	34.3	44.26	H
10460.000	48.0	-30.9	37.7	41.23	H
15690.000	54.4	-25.9	40.5	39.74	V
16913.750	55.8	-25.8	41.7	39.85	V
17551.200	55.2	-25.5	41.5	39.27	H

Channel 54

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5123.600	44.6	-32.4	34.1	42.90	V
5388.800	45.1	-31.3	34.4	42.04	H
10540.000	47.5	-30.6	37.7	40.41	V
15809.150	55.6	-25.5	40.7	40.44	H
16311.520	55.2	-25.7	41.3	39.57	H
17000.650	55.4	-25.9	41.8	39.51	V

Channel 62

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.740	59.3	-31.6	34.4	56.62	H
5352.380	59.0	-31.6	34.4	56.23	V
10620.000	48.1	-30.1	37.7	40.45	H
15930.000	55.6	-25.9	40.8	40.71	V
16911.550	55.3	-25.8	41.7	39.40	V
17626.053	55.0	-25.2	41.5	38.77	V

Channel 102

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5459.630	56.9	-31.4	34.5	53.87	H
5459.890	57.0	-31.4	34.5	53.90	H
11019.950	46.1	-31.0	37.9	39.22	H
16529.850	54.1	-25.8	41.5	38.40	V
17627.650	55.9	-25.2	41.5	39.63	H
17900.450	56.2	-25.5	41.4	40.27	H

Channel 118

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5481.200	45.4	-31.6	34.5	42.49	H
5750.800	45.0	-32.7	34.9	42.77	H
11180.000	47.0	-30.4	38.0	39.44	V
16770.200	52.8	-26.0	41.7	37.07	V
17685.950	55.4	-25.4	41.5	39.38	H
17959.300	56.1	-25.1	41.4	39.84	H

Channel 134

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5725.260	53.8	-32.8	34.8	51.77	H
5727.376	53.7	-32.8	34.8	51.63	H
11340.050	45.9	-30.6	38.1	38.41	V
17010.000	54.0	-25.9	41.8	38.14	H
17611.700	55.6	-25.3	41.5	39.36	V
17668.900	55.6	-25.3	41.5	39.44	H

Sample calculation: 802.11n 40MHz CH134–Peak, 11340.050 MHz

Peak ERP(dBm) = P_{Mea}(38.4 dBuV/m) + Cable Loss(-30.6) + Antenna Factor(38.1) = 45.9 dBuV/m

A.7. Spurious Emissions Radiated (150kHz- 30MHz)

Test Condition:

Voltage（V）	Frequency（Hz）
110	60

Measurement uncertainty:
Expanded measurement uncertainty for this test item is U =3.2dB, k=2.

Measurement Result and limit:
WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig.38	Fig.39	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.38	Fig.39	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:

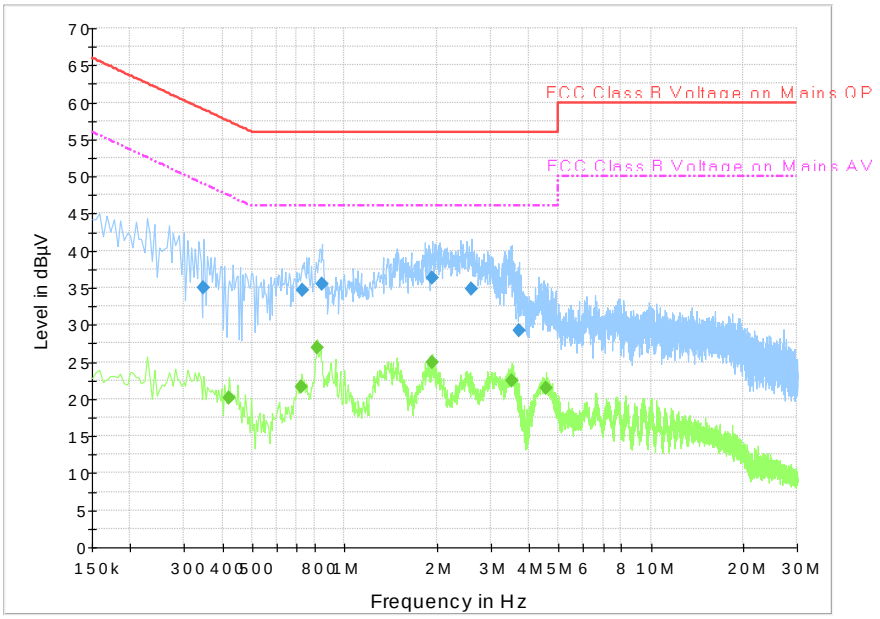

Fig. 38 Conducted Emission(802.11a, Ch40, TX)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.348000	34.9	2000.0	9.000	On	N	19.9	24.1	59.0
0.730500	34.7	2000.0	9.000	On	N	19.9	21.3	56.0
0.843000	35.5	2000.0	9.000	On	N	19.8	20.5	56.0
1.936500	36.4	2000.0	9.000	On	L1	19.7	19.6	56.0
2.598000	34.8	2000.0	9.000	On	N	19.6	21.2	56.0
3.705000	29.2	2000.0	9.000	On	L1	19.6	26.8	56.0

Measurement Result:

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.420000	20.1	2000.0	9.000	On	L1	19.9	27.4	47.4
0.726000	21.5	2000.0	9.000	On	L1	19.8	24.5	46.0
0.816000	26.9	2000.0	9.000	On	L1	19.7	19.2	46.0
1.936500	25.0	2000.0	9.000	On	L1	19.7	21.0	46.0
3.502500	22.5	2000.0	9.000	On	L1	19.7	23.5	46.0
4.560000	21.5	2000.0	9.000	On	L1	19.6	24.5	46.0

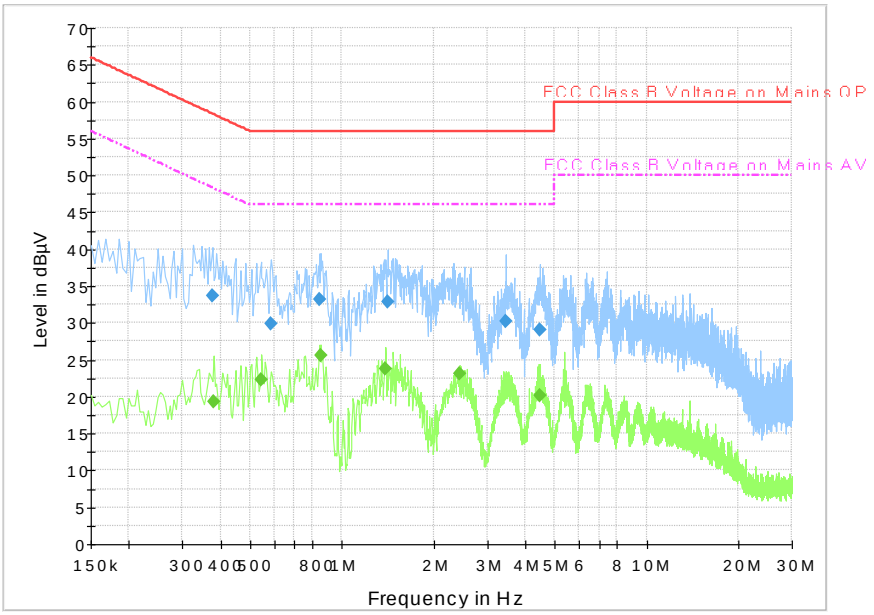

Fig. 39 Conducted Emission(802.11a, IDLE)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.375000	33.7	2000.0	9.000	On	N	19.9	24.7	58.4
0.586500	29.9	2000.0	9.000	On	L1	19.9	26.1	56.0
0.843000	33.3	2000.0	9.000	On	L1	19.7	22.7	56.0
1.414500	32.9	2000.0	9.000	On	L1	19.6	23.1	56.0
3.453000	30.3	2000.0	9.000	On	N	19.7	25.7	56.0
4.474500	29.1	2000.0	9.000	On	L1	19.6	26.9	56.0

Measurement Result:

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.379500	19.3	2000.0	9.000	On	L1	19.8	29.0	48.3
0.546000	22.3	2000.0	9.000	On	L1	19.9	23.7	46.0
0.852000	25.6	2000.0	9.000	On	L1	19.7	20.4	46.0
1.392000	23.8	2000.0	9.000	On	L1	19.6	22.2	46.0
2.440500	23.2	2000.0	9.000	On	L1	19.7	22.8	46.0
4.474500	20.1	2000.0	9.000	On	L1	19.6	25.9	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% ofthe total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

Measurement Result:

Mode	Channel	99% Occupied bandwidth (MHz)		conclusion
802.11a	5180 MHz	Fig.40	17.40	P
	5200 MHz	Fig.41	17.48	P
	5240 MHz	Fig.42	17.48	P
802.11n HT20	5180 MHz	Fig.43	18.08	P
	5200 MHz	Fig.44	18.08	P
	5240 MHz	Fig.45	18.04	P
802.11n HT40	5190 MHz	Fig.46	36.32	P
	5230 MHz	Fig.47	36.32	P

Conclusion: PASS

Test graphs as below:

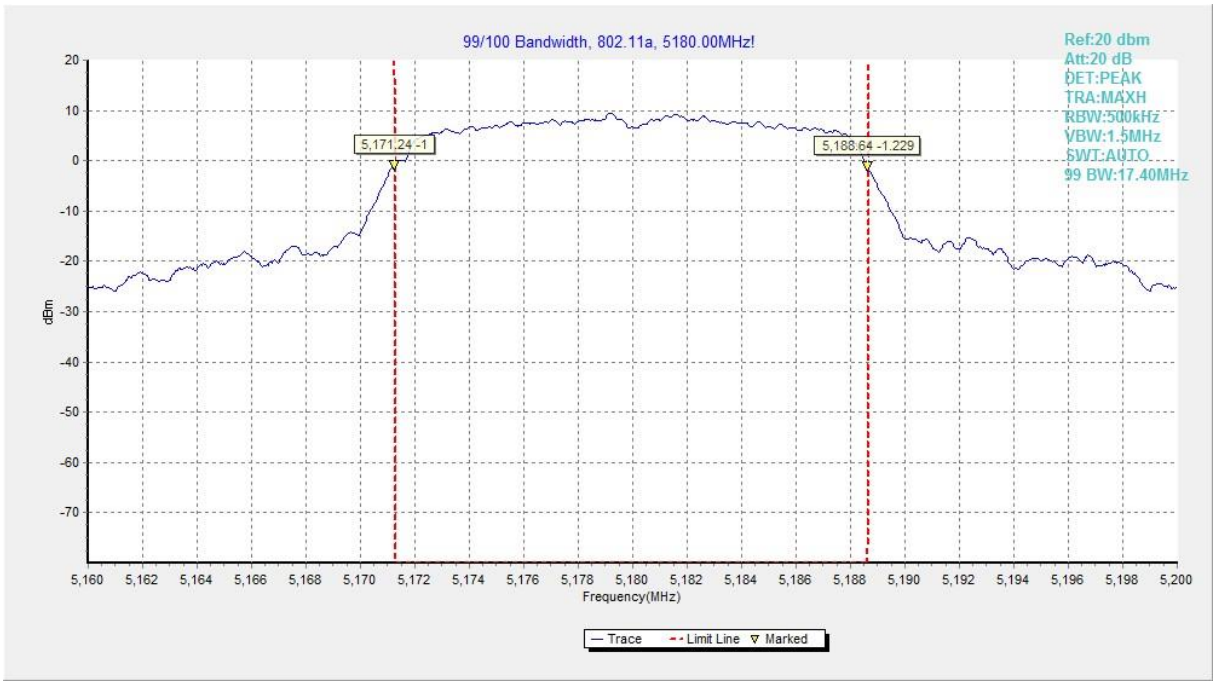

Fig. 40 99% Occupied bandwidth (802.11a, 5180MHz)

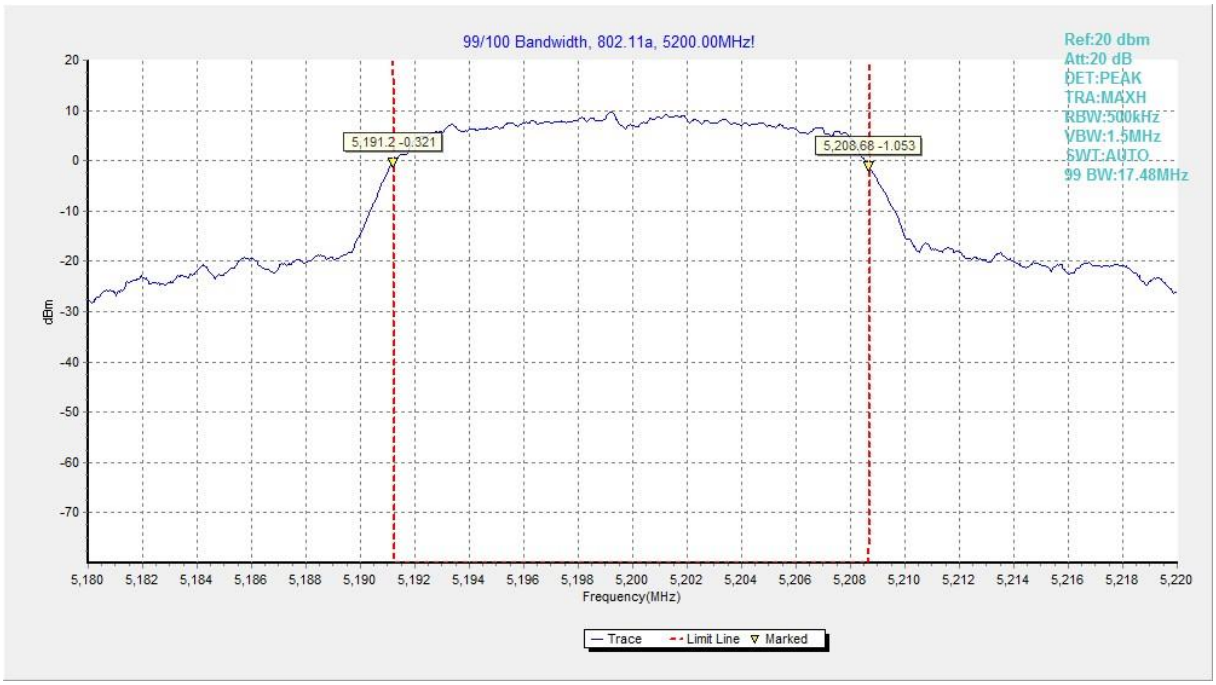

Fig. 41 99% Occupied bandwidth (802.11a, 5200MHz)

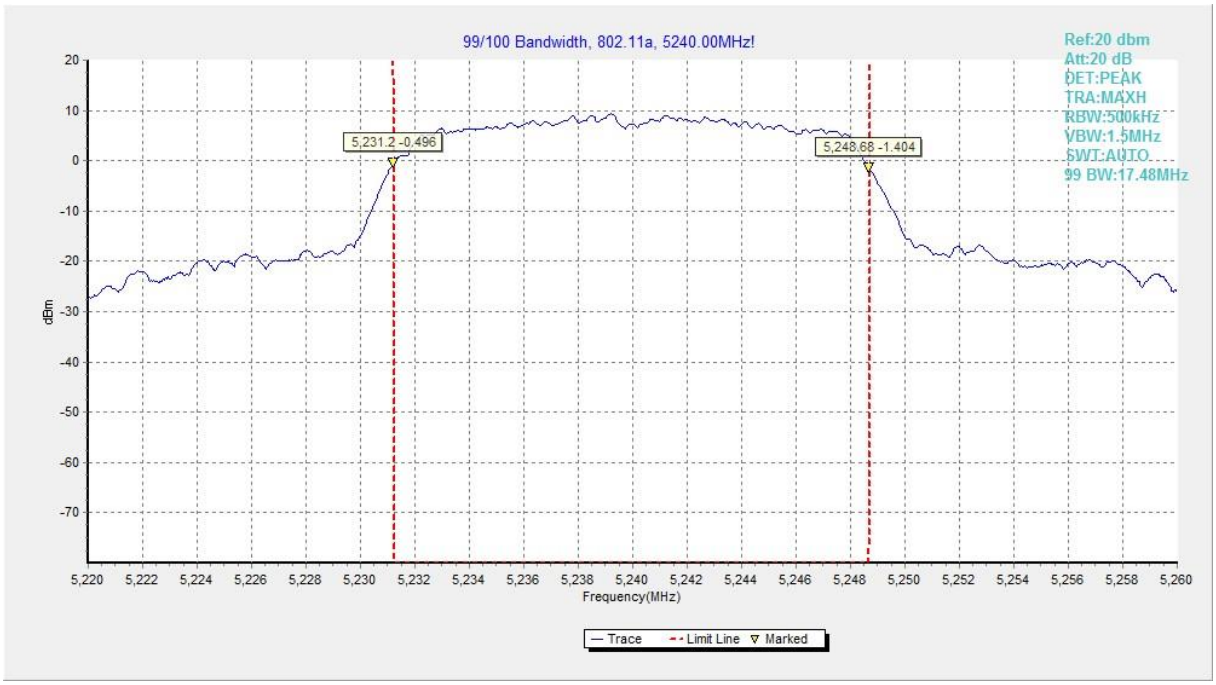

Fig. 42 99% Occupied bandwidth (802.11a, 5240MHz)

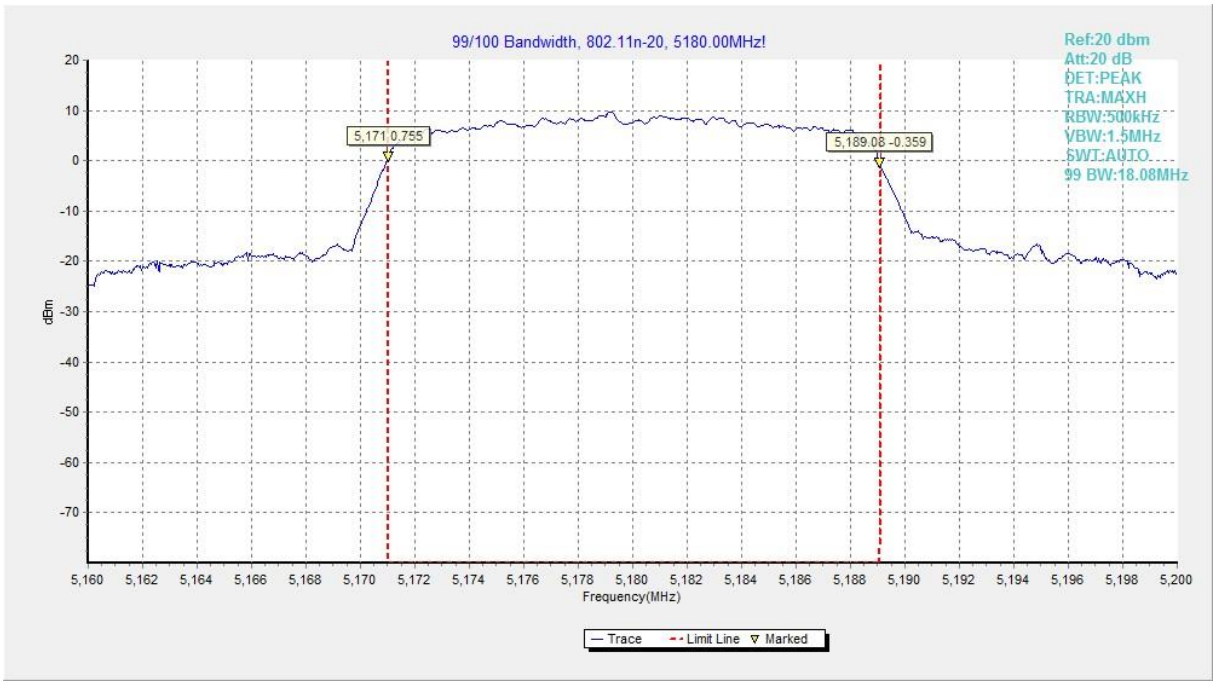

Fig. 43 99% Occupied bandwidth (802.11n-HT20, 5180MHz)

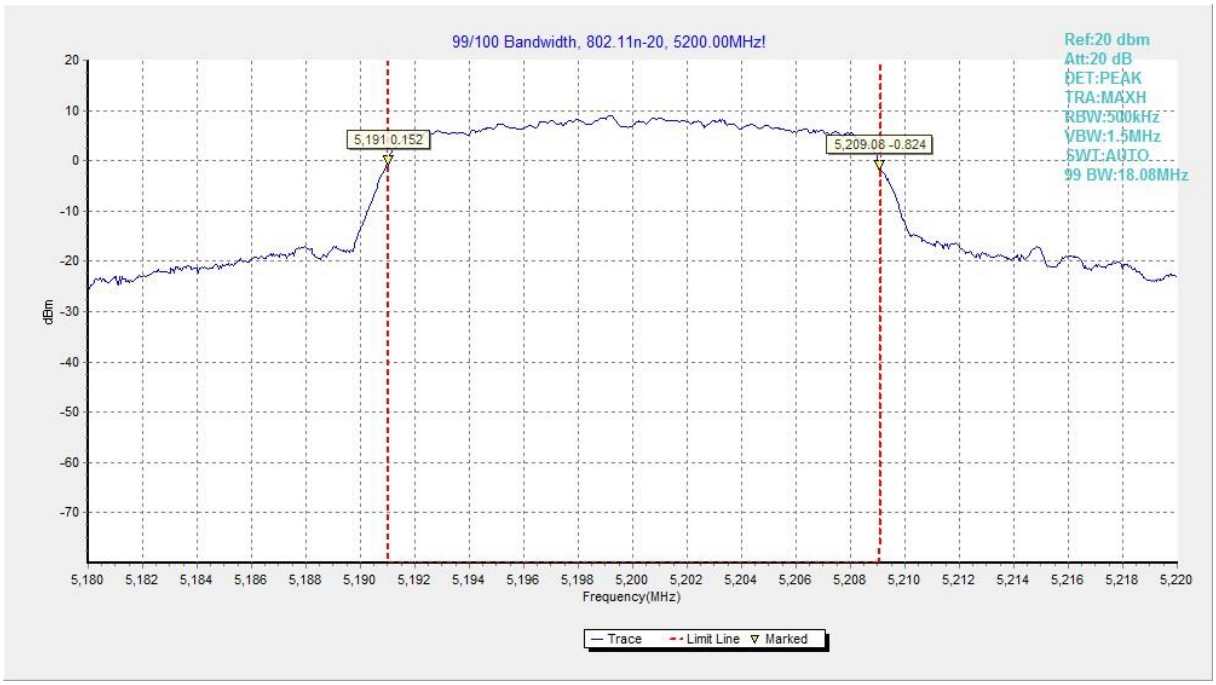

Fig. 44 99% Occupied bandwidth (802.11n-HT20, 5200MHz)

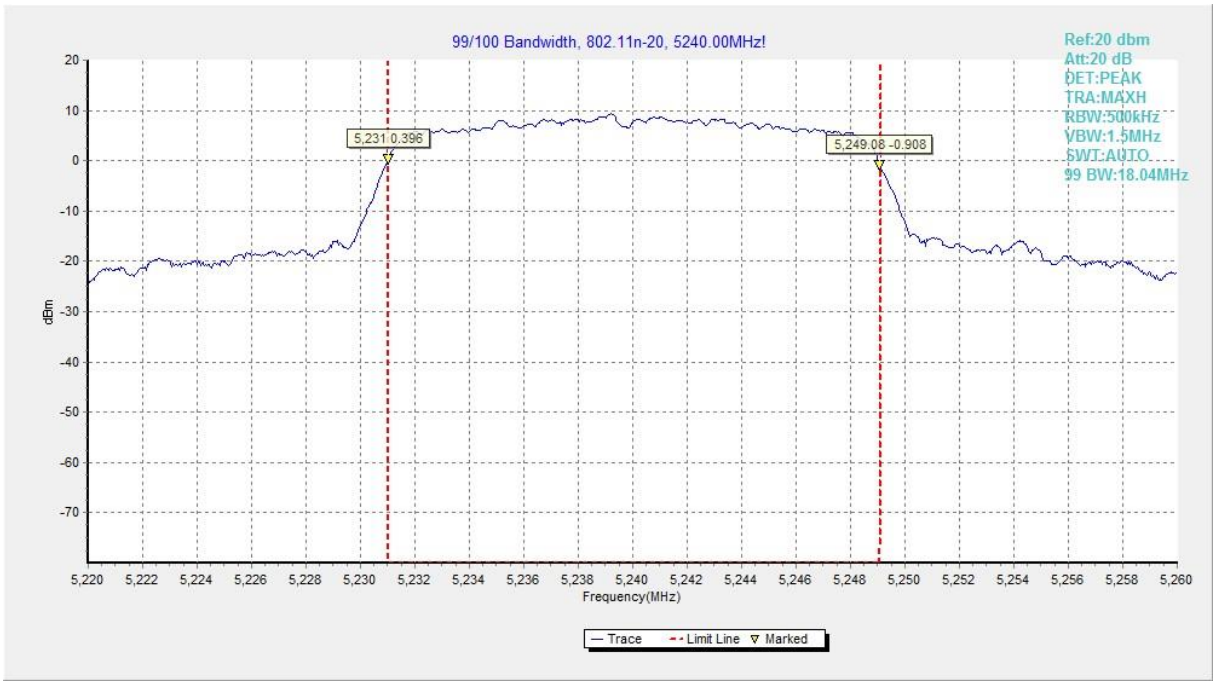

Fig. 45 99% Occupied bandwidth (802.11n-HT20, 5240MHz)

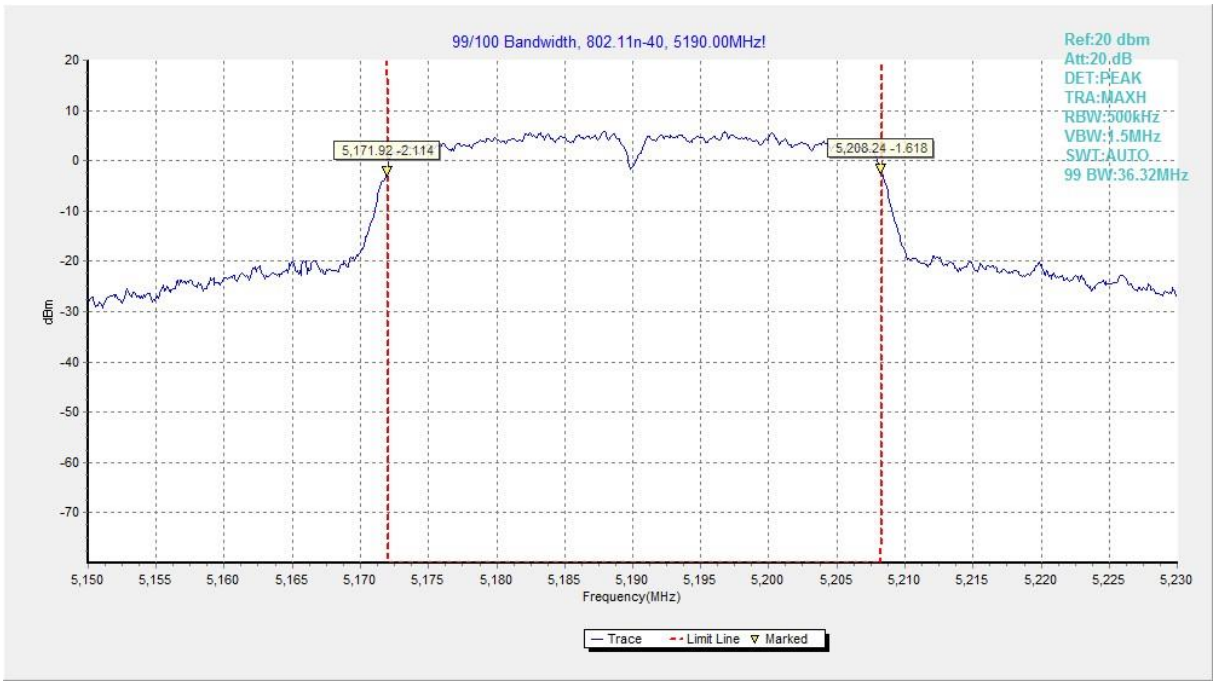

Fig. 46 99% Occupied bandwidth (802.11n-HT40, 5190MHz)

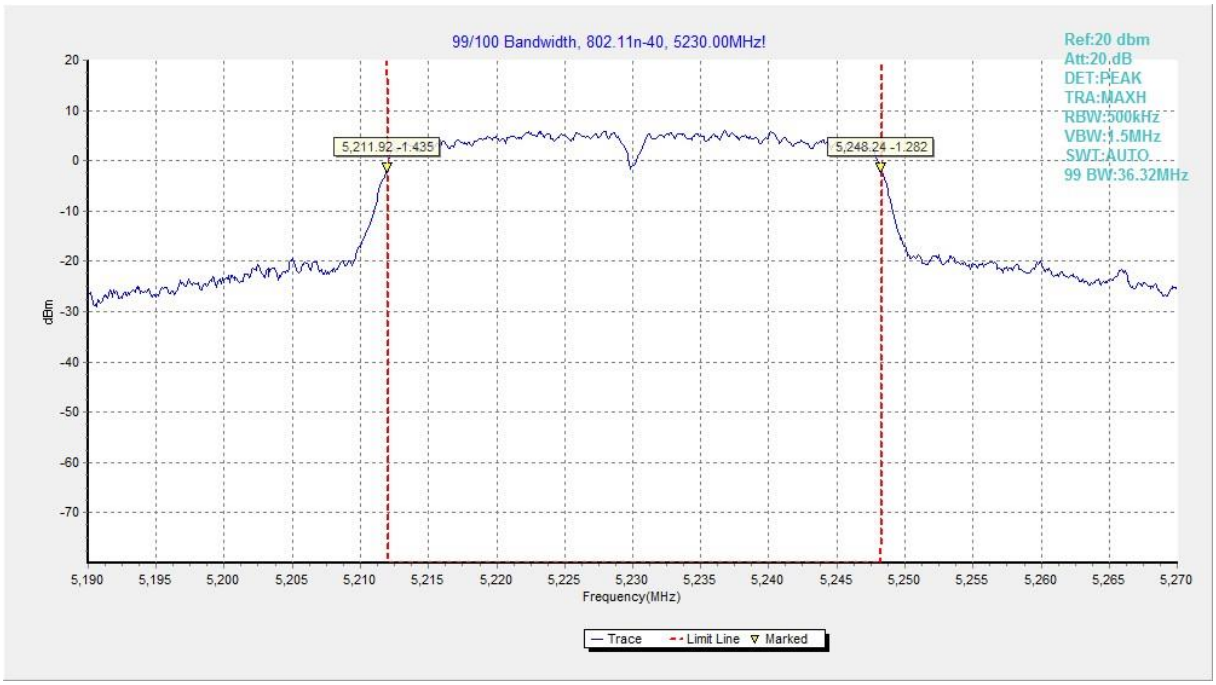

Fig. 47 99% Occupied bandwidth (802.11n-HT40, 5230MHz)

A.9. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Measurement Result:

Mode	Channel	Test Condition		Result(MHz)
802.11a	5200 MHz (5150-5250)	Tnom	Vnom	0.01
		Tmax	Vnom	
		Tmin	Vnom	
		Vmax	Tnom	
		Vmin	Tnom	
802.11a	5260 MHz (5250-5350)	Tnom	Vnom	0.01
		Tmax	Vnom	
		Tmin	Vnom	
		Vmax	Tnom	
		Vmin	Tnom	
802.11n-HT20	5500 MHz (5470-5725)	Tnom	Vnom	0.01
		Tmax	Vnom	
		Tmin	Vnom	
		Vmax	Tnom	
		Vmin	Tnom	

A.10. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

ANNEX B: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2016-09-29 through 2017-09-30
Effective Dates

For the National Voluntary Laboratory Accreditation Program

***** END OF REPORT BODY *****