TEST REPORT

Reference No.	:	WTD21D08085396W
FCC ID.....	:	2AADC-BK7
Applicant	:	Inspectron, Inc.
Address	:	29108 Lorie Lane Wixom, MI 48393 USA
Manufacturer	:	Wuxi Vision Optoelectronic Technology Co., Ltd
Address	:	Room 102, No.42 Building Wuxi Zhongguancun Software Park Xinwu District, Wuxi City, Jiangsu Province, China
Product Name	:	BK7000
Model No.	:	BK7000
Standards.....	:	FCC CFR47 Part 15 E Section 15.407
Date of Receipt sample.....	:	2021-08-19
Date of Test.....	:	2021-08-19 to 2021-10-09
Date of Issue	:	2021-10-09
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.
The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:
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Compiled by:

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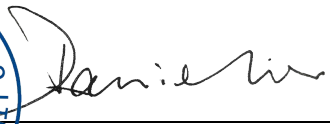
Approved by:



Daniel Liu / Designated Reviewer

2 Contents

3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD21D08085396W	2021-08-19	2021-08-19 to 2021-10-09	2021-10-09	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	BK7000
Model(s):	BK7000
Model Description:	N/A
Wi-Fi Specification:	2.4G-802.11b/g/n HT20/n HT40 5G-802.11a/ n(HT20/40)/ac(HT20/40/80)
Bluetooth Version:	Bluetooth v4.1 with BLE
Hardware Version:	REV.E
Software Version:	20.09.21
Note:	N/A

4.2 Details of E.U.T.

Operation Frequency:	802.11a/ n(HT20/40)/ac(HT20/40/80): 5150MHz to 5250MHz 802.11a/ n(HT20/40)/ac(HT20/40/80): 5725MHz to 5850MHz
Max. RF output power:	U-NII-1: 16.17dBm U-NII-3: 10.06dBm
Type of Modulation:	OFDM
Antenna installation:	internal permanent antenna
Antenna Gain:	U-NII-1: 4dBi U-NII-3: 4dBi
Ratings:	Battery DC 3.7V, 3000mAh DC 5.0V, 3.0A, 15.0W charging from adapter (Adapter: Input:100-240V~ 50/60Hz, 0.6A)
Adapter:	Model: ICP20-050-3000B

4.3 Channel List

U-NII-1 (5.15-5.25GHz)		U-NII-3 (5.725-5.85GHz)	
channel	**Frequency(MHz)**	**channel**	**Frequency(MHz)**
36	5180	149	5745
38	5190	151	5755
40	5200	153	5765
42	5210	155	5775
44	5220	157	5785
46	5230	159	5795
48	5240	161	5805
		165	5825

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)/ac(HT20):

channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	149	5745
40	5200	157	5785
48	5240	165	5825

For 802.11 n(HT40)/ac(HT40):

channel	Frequency(MHz)	channel	Frequency(MHz)
38	5190	151	5755
46	5230	159	5795

For 802.11 ac(HT80):

channel	Frequency(MHz)	channel	Frequency(MHz)
42	5210	155	5775

4.4 Test Mode Description:

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.
Transmitting duty cycle is no less 98%.
The software is installed in operation system, named “RFTestTool.apk” ,Version 1,date 20160518.

Test Items	Mode	Data Rate	Channel	TX/RX
Radiated Emissions	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
Duty Cycle	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
Band Edge	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX

6dB Bandwidth	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
26dB Bandwidth and 99% Occupied Bandwidth	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
Conducted Output Power	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
Power Spectral Density	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX
	802.11n(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT20)	MCS0	U-NII-1 36/40/48 U-NII-3 149/155/165	TX

	802.11ac(HT40)	MCS0	U-NII-1 38/46 U-NII-3 151/159	TX
	802.11ac(HT80)	MCS0	U-NII-1 42 U-NII-3 155	TX
Frequency Stability	Un-modulation	/	U-NII-1 36/40/48 U-NII-3 149/155/165	TX

4.5 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

5 Equipment Used during Test

5.1 Equipments List

Conducted Emissions Test Site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	100947	2021-07-26	2022-07-25
2.	LISN	R&S	ENV216	101215	2021-07-26	2022-07-25
3.	Cable	Top	TYPE16(3.5M)	-	2021-07-26	2022-07-25
Conducted Emissions Test Site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	101155	2021-07-26	2022-07-25
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	2021-07-26	2022-07-25
3.	Limiter	York	MTS-IMP-136	261115-001-0024	2021-07-26	2022-07-25
4.	Cable	LARGE	RF300	-	2021-07-26	2022-07-25
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1	EMC Analyzer	Agilent	E7405A	MY45114943	2021-04-26	2022-04-25
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	2021-04-26	2022-04-25
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2020-08-22	2021-08-21
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2021-08-23	2022-08-22
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2021-04-26	2022-04-25
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2021-07-30	2022-07-29
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2021-07-26	2022-07-25
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	N/A	2021-04-26	2022-04-25
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No**	**Last Calibration Date**	**Calibration Due Date**
1	Test Receiver	R&S	ESCI	101296	2021-04-26	2022-04-25
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2021-04-26	2022-04-25
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	2021-04-26	2022-04-25
4	Cable	HUBER+SUHNER	CBL2	525178	2021-04-26	2022-04-25
RF Conducted Testing						

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	2021-04-26	2022-04-25
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2021-04-26	2022-04-25
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	2021-04-26	2022-04-25

5.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
/	/	/	/

5.3 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	± 1 x 10^{-6}
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (30M~1000MHz)
	± 5.47 dB (1000M~25000MHz)
Conducted Spurious Emissions test	± 3.64 dB (AC mains 150KHz~30MHz)

5.4 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

6 Test Summary

Test Items	Test Requirement	Result
Conducted Emissions	15.207(a)	PASS
Radiated Emissions	15.407(a) 15.205(a) 15.209(a)	PASS
Duty Cycle	KDB 789033	--
6dB Bandwidth	15.407(a)	PASS
26 dB Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	PASS
Maximum Conducted Output Power	15.407(a)	PASS
Power Spectral Density	15.407(a)	PASS
Restricted bands around fundamental frequency	15.407(a)	PASS
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

7 Conducted Emission

Test Requirement: FCC CFR 47 Part 15 Section 15.207

Test Method: ANSI C63.10:2013

Test Result: PASS

Frequency Range: 150kHz to 30MHz

Class/Severity: Class B

Limit:

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46
0.5 to 5	56	46
5 to 30	60	50

7.1 E.U.T. Operation

Operating Environment **:**

Temperature: 21.5 °C

Humidity: 51.9 % RH

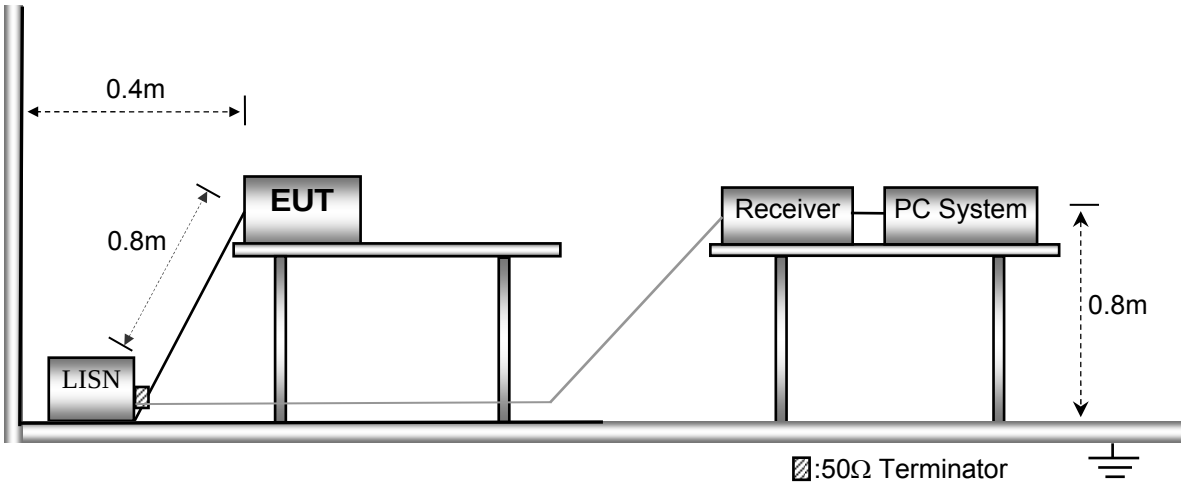
Atmospheric Pressure: 101.2kPa

EUT Operation **:**

The test was performed in TX transmitting mode, the worst data were shown in the report.

7.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10.



7.3 Measurement Description

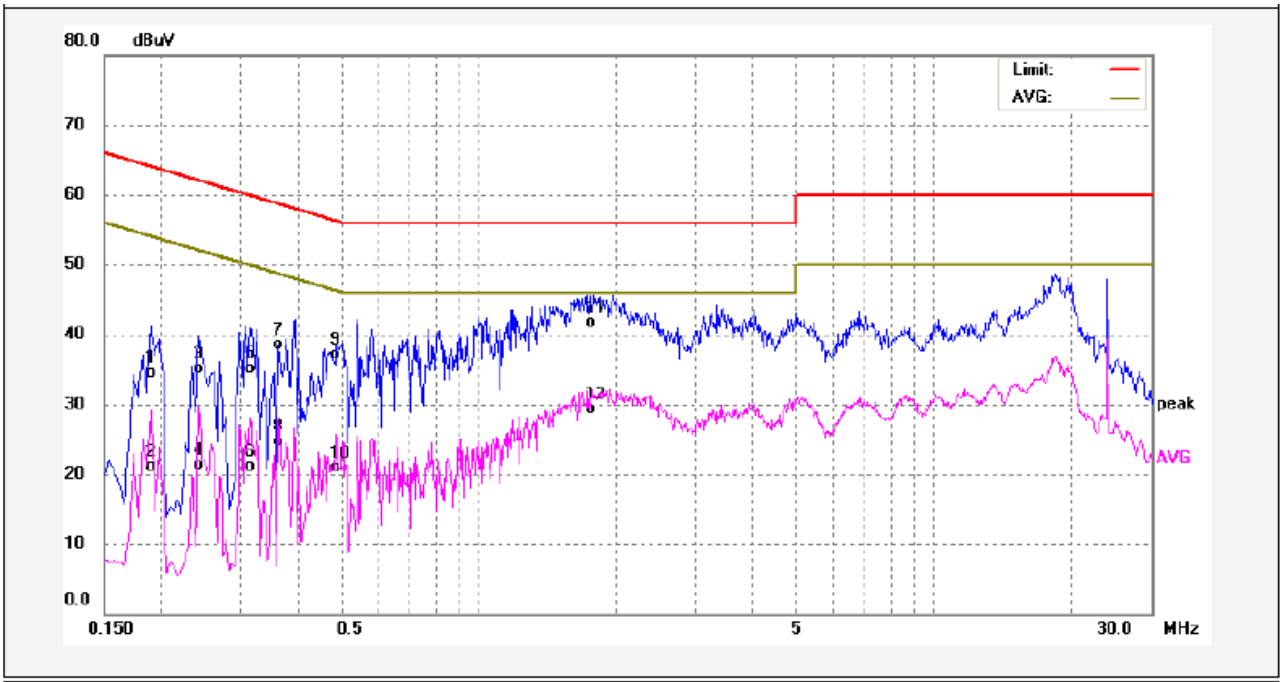
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

7.4 Conducted Emission Test Result

An initial pre-scan was performed on the live and neutral lines.

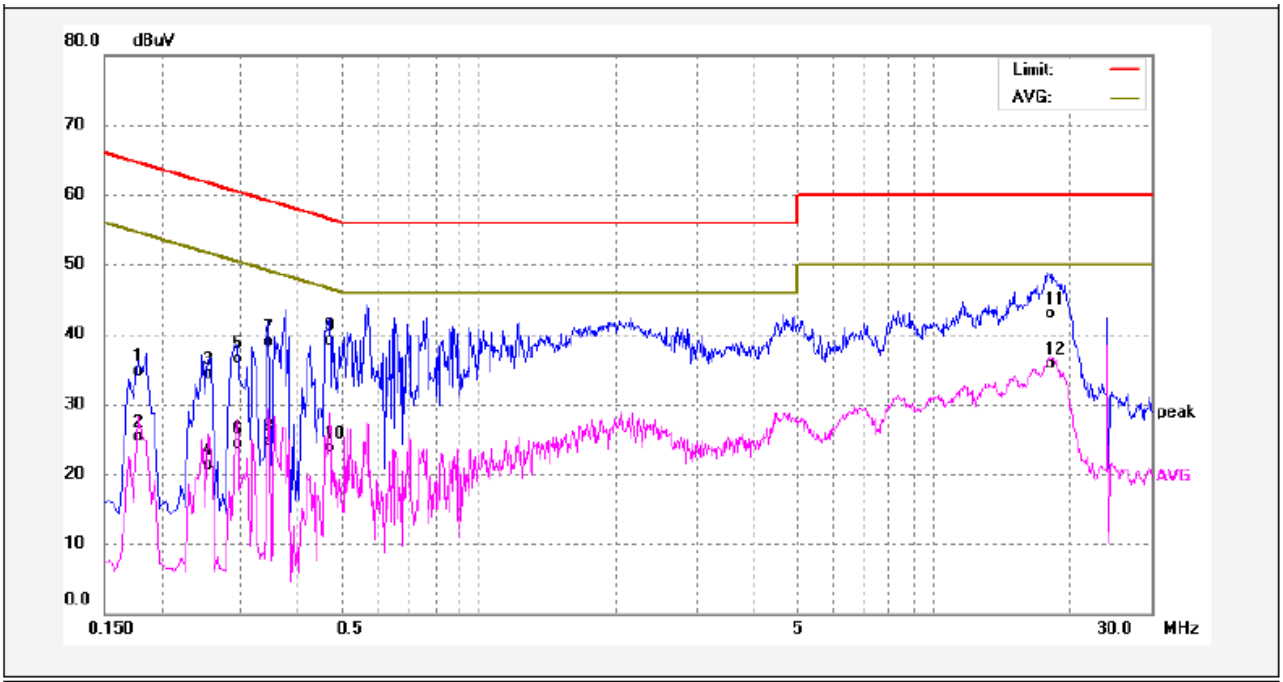
Worst Mode: WIFI mode (802.11a mode low channel)

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1900	23.87	10.70	34.57	64.03	-29.46	QP	
2	0.1900	10.35	10.70	21.05	54.03	-32.98	AVG	
3	0.2420	24.42	10.65	35.07	62.02	-26.95	QP	
4	0.2420	10.67	10.65	21.32	52.02	-30.70	AVG	
5	0.3140	24.53	10.61	35.14	59.86	-24.72	QP	
6	0.3140	10.44	10.61	21.05	49.86	-28.81	AVG	
7	0.3620	28.00	10.59	38.59	58.68	-20.09	QP	
8	0.3620	14.10	10.59	24.69	48.68	-23.99	AVG	
9	0.4860	26.62	10.53	37.15	56.24	-19.09	QP	
10	0.4860	10.44	10.53	20.97	46.24	-25.27	AVG	
11	1.7740	31.16	10.60	41.76	56.00	-14.24	QP	
12	1.7740	18.67	10.60	29.27	46.00	-16.73	AVG	

Neutral line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1780	24.03	10.74	34.77	64.57	-29.80	QP	
2	0.1780	14.48	10.74	25.22	54.57	-29.35	AVG	
3	0.2540	23.75	10.64	34.39	61.62	-27.23	QP	
4	0.2540	10.72	10.64	21.36	51.62	-30.26	AVG	
5	0.2940	25.88	10.62	36.50	60.41	-23.91	QP	
6	0.2940	13.78	10.62	24.40	50.41	-26.01	AVG	
7	0.3460	28.23	10.60	38.83	59.06	-20.23	QP	
8	0.3460	14.19	10.60	24.79	49.06	-24.27	AVG	
9	0.4700	28.57	10.53	39.10	56.51	-17.41	QP	
10	0.4700	13.25	10.53	23.78	46.51	-22.73	AVG	
11	18.0100	32.18	10.75	42.93	60.00	-17.07	QP	
12	18.0100	24.93	10.75	35.68	50.00	-14.32	AVG	

8 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.407

Test Method: ANSI C63.10:2013

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Distance	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

8.1 EUT Operation

Operating Environment **:**

Temperature: 23.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

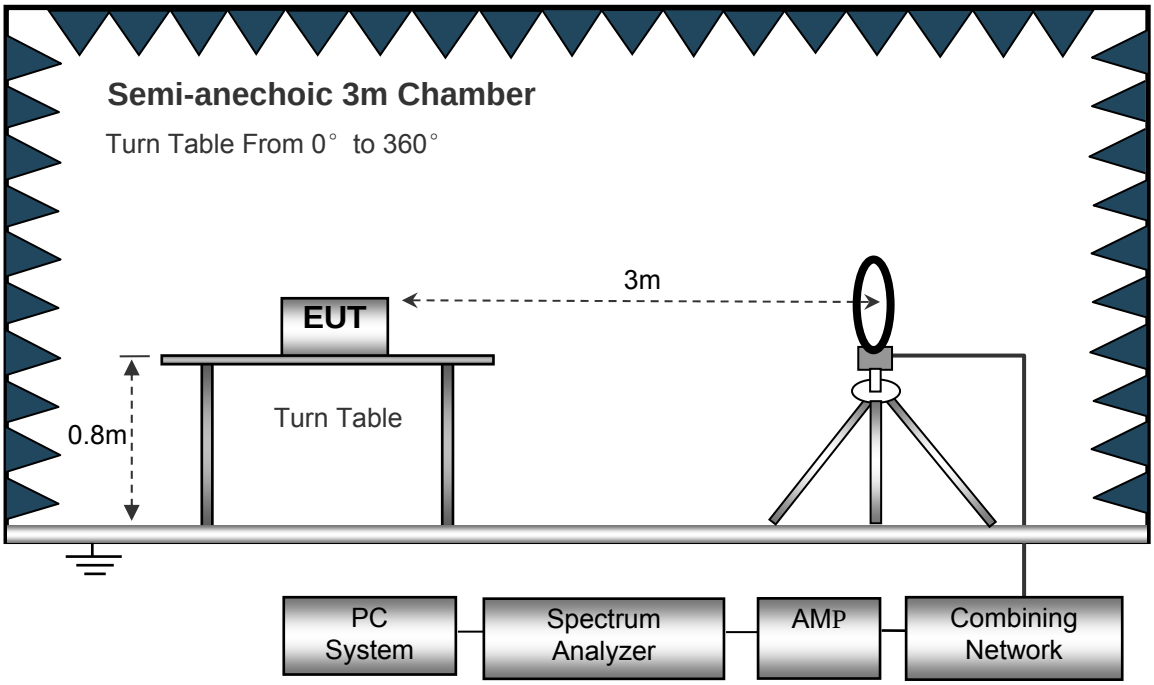
EUT Operation **:**

The test was performed in transmitting mode, the test data were shown in the report.

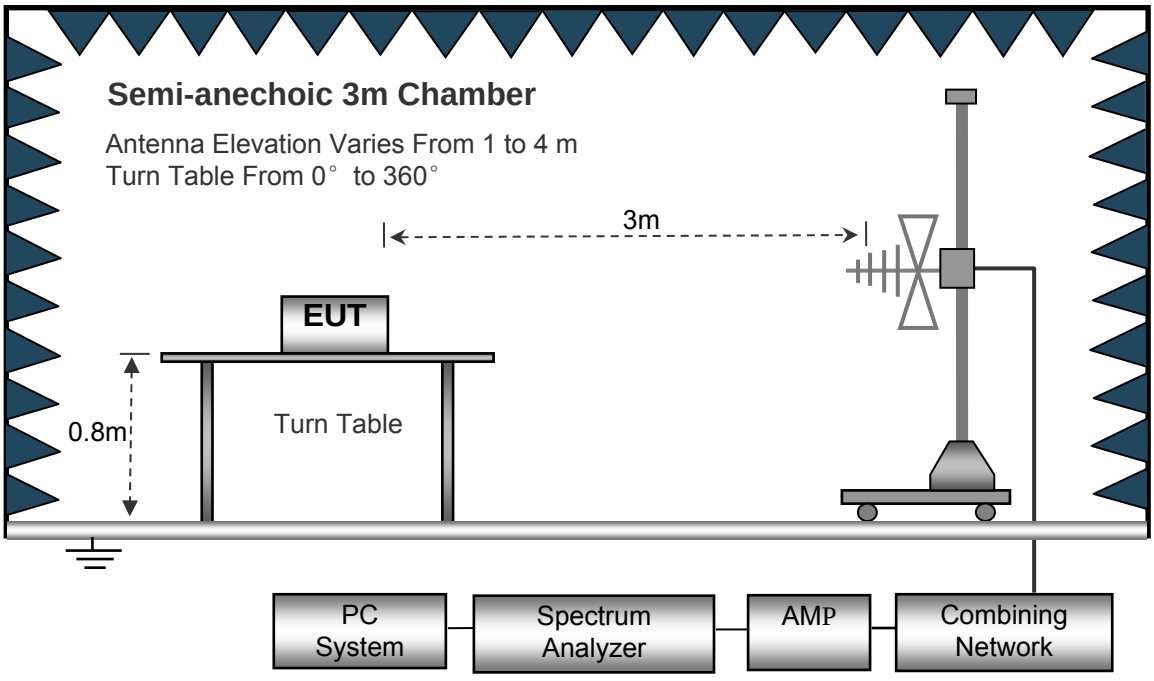
8.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10: 2013.

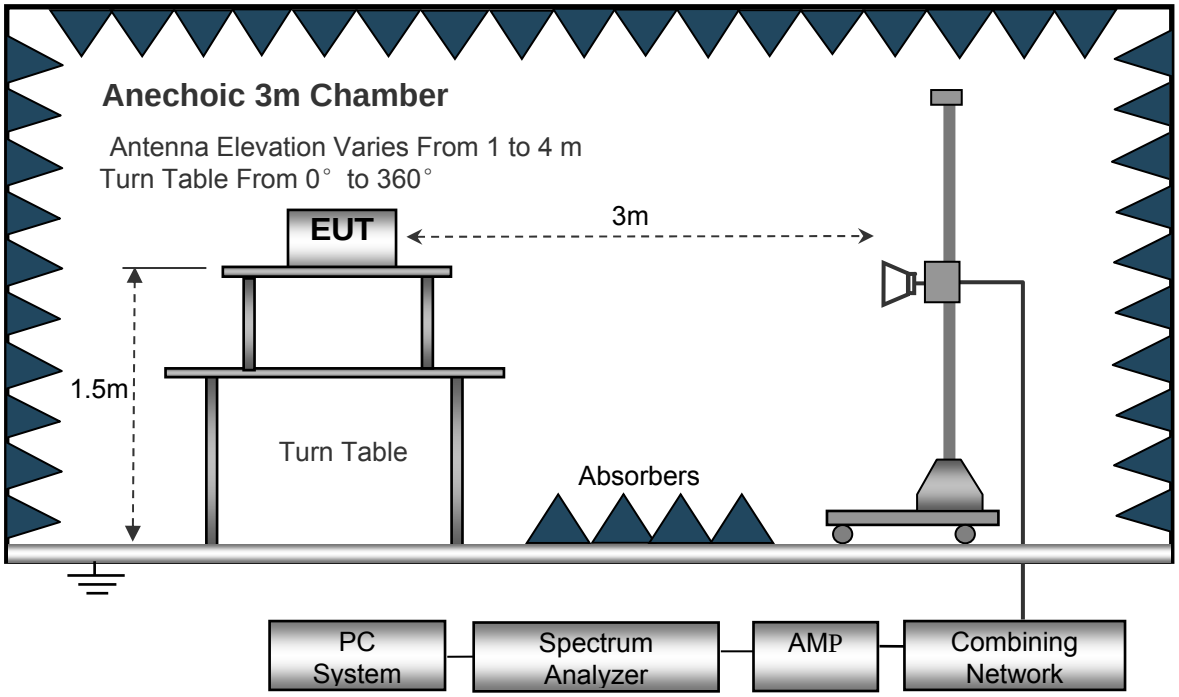
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



8.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed ..... Auto
IF Bandwidth..... 10kHz
Video Bandwidth..... 10kHz
Resolution Bandwidth..... 10kHz

30MHz ~ 1GHz

Sweep Speed ..... Auto
Detector ..... PK
Resolution Bandwidth..... 100kHz
Video Bandwidth..... 300kHz

Above 1GHz

Sweep Speed ..... Auto
Detector ..... PK
Resolution Bandwidth..... 1MHz
Video Bandwidth..... 3MHz
Detector ..... Ave.
Resolution Bandwidth..... 1MHz
Video Bandwidth..... 10Hz

8.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in X axis,so the worst data were shown as follow.
8. A 2.4GHz high –pass filter is used druing radiated emissions above 1GHz measurement.

8.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – Limit

8.6 Summary of Test Results

Test Frequency: 9KHz~30MHz

Frequency	Measurement results dBμV @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dBμV/m @30m	Limits dBμV/m @30m	Margin dB
(MHz)	Measurement results	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
U-NII-1:802.11a 5180MHz							
6.023	25.24	QP	21.84	40.00	7.08	29.54	-22.46
15.731	25.13	QP	21.35	40.00	6.48	29.54	-23.06
25.680	25.47	QP	20.67	40.00	6.14	29.54	-23.40
U-NII-1:802.11n20 5180MHz							
6.023	25.27	QP	21.84	40.00	7.11	29.54	-22.43
15.731	25.18	QP	21.35	40.00	6.53	29.54	-23.01
25.680	25.44	QP	20.67	40.00	6.11	29.54	-23.43
U-NII-1:802.11ac 20 5180MHz							
6.023	25.34	QP	21.84	40.00	7.18	29.54	-22.36
15.731	25.28	QP	21.35	40.00	6.63	29.54	-22.91
25.680	25.41	QP	20.67	40.00	6.08	29.54	-23.46
U-NII-1:802.11n40 5190MHz							
6.023	25.34	QP	21.84	40.00	7.18	29.54	-22.36
15.731	25.48	QP	21.35	40.00	6.83	29.54	-22.71
25.680	25.11	QP	20.67	40.00	5.78	29.54	-23.76
U-NII-1:802.11ac40 5190MHz							
6.023	25.04	QP	21.84	40.00	6.88	29.54	-22.66
15.731	25.21	QP	21.35	40.00	6.56	29.54	-22.98
25.680	25.40	QP	20.67	40.00	6.07	29.54	-23.47
U-NII-1:802.11ac80 5210MHz							
6.023	25.43	QP	21.84	40.00	7.27	29.54	-22.27
15.731	25.10	QP	21.35	40.00	6.45	29.54	-23.09
25.680	25.21	QP	20.67	40.00	5.88	29.54	-23.66

Frequency	Measurement results dBμV @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dBμV/m @30m	Limits dBμV/m @30m	Margin dB
(MHz)	Measurement results	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
U-NII-3 802.11a 5745MHz							
6.022	24.12	QP	21.84	40.00	5.96	29.54	-23.58
15.730	24.34	QP	21.35	40.00	5.69	29.54	-23.85
25.680	25.45	QP	20.67	40.00	6.12	29.54	-23.42
U-NII-3 802.11n20 5745MHz							
6.022	24.53	QP	21.84	40.00	6.37	29.54	-23.17
15.730	24.12	QP	21.35	40.00	5.47	29.54	-24.07
25.680	25.44	QP	20.67	40.00	6.11	29.54	-23.43
U-NII-3 802.11ac 5745MHz							
6.022	24.23	QP	21.84	40.00	6.07	29.54	-23.47
15.730	24.42	QP	21.35	40.00	5.77	29.54	-23.77
25.680	25.29	QP	20.67	40.00	5.96	29.54	-23.58
U-NII-3 802.11n40 5755MHz							
6.022	24.47	QP	21.84	40.00	6.31	29.54	-23.23
15.730	24.26	QP	21.35	40.00	5.61	29.54	-23.93
25.680	25.69	QP	20.67	40.00	6.36	29.54	-23.18
U-NII-3 802.11ac40 5755MHz							
6.022	24.53	QP	21.84	40.00	6.37	29.54	-23.17
15.730	24.35	QP	21.35	40.00	5.70	29.54	-23.84
25.680	25.70	QP	20.67	40.00	6.37	29.54	-23.17
U-NII-3 802.11ac80 5775MHz							
6.022	24.51	QP	21.84	40.00	6.35	29.54	-23.19
15.730	24.75	QP	21.35	40.00	6.10	29.54	-23.44
25.680	25.07	QP	20.67	40.00	5.74	29.54	-23.80

Test Frequency : 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-1 Low Channel 5180MHz									
223.45	39.27	QP	138	1.6	H	-11.62	27.65	46.00	-18.35
223.45	35.18	QP	186	1.4	V	-11.62	23.56	46.00	-22.44
4505.11	52.60	PK	359	1.5	H	-2.03	50.57	74.00	-23.43
4505.11	40.32	Ave	359	1.5	H	-2.03	38.29	54.00	-15.71
5145.29	55.61	PK	23	1.8	H	-1.02	54.59	74.00	-19.41
5145.29	44.13	Ave	23	1.8	H	-1.02	43.11	54.00	-10.89
10360.00	40.67	PK	70	1.3	H	5.33	46.00	74.00	-28.00
10360.00	37.39	Ave	70	1.3	H	5.33	42.72	54.00	-11.28
802.11a U-NII-1 Middle channel 5200MHz									
223.45	39.90	QP	270	1.1	H	-11.62	28.28	46.00	-17.72
223.45	34.70	QP	34	1.4	V	-11.62	23.08	46.00	-22.92
4502.07	53.74	PK	18	1.4	H	-1.94	51.80	74.00	-22.20
4502.07	39.42	Ave	18	1.4	H	-1.94	37.48	54.00	-16.52
5122.71	55.01	PK	230	1.7	H	-1.06	53.95	74.00	-20.05
5122.71	43.62	Ave	230	1.7	H	-1.06	42.56	54.00	-11.44
10400.00	40.63	PK	285	2.0	H	5.21	45.84	74.00	-28.16
10400.00	37.59	Ave	285	2.0	H	5.21	42.80	54.00	-11.20

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-1 High channel 5240MHz									
223.45	40.79	QP	272	1.3	H	-11.62	29.17	46.00	-16.83
223.45	34.31	QP	53	1.5	V	-11.62	22.69	46.00	-23.31
4530.43	53.76	PK	159	1.6	H	-2.24	51.52	74.00	-22.48
4530.43	38.74	Ave	159	1.6	H	-2.24	36.50	54.00	-17.50
5115.05	56.97	PK	19	1.6	H	-1.09	55.88	74.00	-18.12
5115.05	43.36	Ave	19	1.6	H	-1.09	42.27	54.00	-11.73
10480.00	41.31	PK	253	2.0	H	5.14	46.45	74.00	-27.55
10480.00	37.74	Ave	253	2.0	H	5.14	42.88	54.00	-11.12
802.11a U-NII-3 Low Channel 5745MHz									
223.45	38.66	QP	263	1.9	H	-11.62	27.04	46.00	-18.96
223.45	37.56	QP	319	1.9	V	-11.62	25.94	46.00	-20.06
4531.39	53.18	PK	112	1.7	H	-2.06	51.12	74.00	-22.88
4531.39	36.24	Ave	112	1.7	H	-2.06	34.18	54.00	-19.82
11490.00	41.74	PK	123	1.5	H	5.93	47.67	68.20	-20.53
11490.00	36.03	Ave	123	1.5	H	5.93	41.96	54.00	-12.04
5359.18	46.59	PK	277	1.8	H	-1.25	45.34	74.00	-28.66
5359.18	39.14	Ave	277	1.8	H	-1.25	37.89	54.00	-16.11

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-3 Middle channel 5785MHz									
223.45	38.19	QP	12	1.6	H	-11.62	26.57	46.00	-19.43
223.45	37.04	QP	139	1.5	V	-11.62	25.42	46.00	-20.58
4538.32	54.29	PK	309	1.9	H	-2.03	52.26	74.00	-21.74
4538.32	35.11	Ave	309	1.9	H	-2.03	33.08	54.00	-20.92
11570.00	41.12	PK	212	1.7	H	5.81	46.93	68.20	-21.27
11570.00	37.46	Ave	212	1.7	H	5.81	43.27	54.00	-10.73
5380.51	45.72	PK	276	1.2	H	-1.22	44.50	74.00	-29.50
5380.51	39.88	Ave	276	1.2	H	-1.22	38.66	54.00	-15.34
802.11a U-NII-3 High channel 5825MHz									
223.45	37.34	QP	230	1.2	H	-11.62	25.72	46.00	-20.28
223.45	37.80	QP	358	1.6	V	-11.62	26.18	46.00	-19.82
4537.24	54.42	PK	281	1.9	H	-1.84	52.58	74.00	-21.42
4537.24	33.81	Ave	281	1.9	H	-1.84	31.97	54.00	-22.03
11650.00	40.22	PK	233	1.4	H	5.84	46.06	68.20	-22.14
11650.00	36.19	Ave	233	1.4	H	5.84	42.03	54.00	-11.97
5365.00	46.42	PK	195	1.4	H	-1.30	45.12	74.00	-28.88
5365.00	38.39	Ave	195	1.4	H	-1.30	37.09	54.00	-16.91

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-1 Low Channel 5180MHz									
223.45	36.12	QP	121	1.1	H	-11.62	24.50	46.00	-21.50
223.45	38.92	QP	185	2.0	V	-11.62	27.30	46.00	-18.70
4501.33	54.47	PK	117	1.1	H	-2.14	52.33	74.00	-21.67
4501.33	31.91	Ave	117	1.1	H	-2.14	29.77	54.00	-24.23
5127.20	47.49	PK	64	1.3	H	-1.06	46.43	74.00	-27.57
5127.20	39.76	Ave	64	1.3	H	-1.06	38.70	54.00	-15.30
10360.00	42.03	PK	79	1.2	H	5.33	47.36	74.00	-26.64
10360.00	37.77	Ave	79	1.2	H	5.33	43.10	54.00	-10.90
802.11n(HT20) U-NII-1 Middle channel 5200MHz									
223.45	34.79	QP	197	1.4	H	-11.62	23.17	46.00	-22.83
223.45	38.00	QP	46	1.8	V	-11.62	26.38	46.00	-19.62
4502.00	53.73	PK	17	1.7	H	-2.12	51.61	74.00	-22.39
4502.00	31.27	Ave	17	1.7	H	-2.12	29.15	54.00	-24.85
5125.64	47.13	PK	306	1.0	H	-1.06	46.07	74.00	-27.93
5125.64	39.95	Ave	306	1.0	H	-1.06	38.89	54.00	-15.11
10400.00	39.95	PK	178	1.5	H	5.21	45.16	74.00	-28.84
10400.00	38.00	Ave	178	1.5	H	5.21	43.21	54.00	-10.79

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-1 High channel 5240MHz									
223.45	33.58	QP	285	1.5	H	-11.62	21.96	46.00	-24.04
223.45	37.33	QP	211	1.8	V	-11.62	25.71	46.00	-20.29
4520.79	53.01	PK	254	1.4	H	-1.96	51.05	74.00	-22.95
4520.79	31.83	Ave	254	1.4	H	-1.96	29.87	54.00	-24.13
5138.03	46.36	PK	183	1.9	H	-1.06	45.30	74.00	-28.70
5138.03	41.52	Ave	183	1.9	H	-1.06	40.46	54.00	-13.54
10480.00	40.63	PK	109	1.7	H	5.14	45.77	74.00	-28.23
10480.00	38.23	Ave	109	1.7	H	5.14	43.37	54.00	-10.63
802.11n(HT20) U-NII-3 Low Channel 5745MHz									
223.45	39.55	QP	96	1.5	H	-11.62	27.93	46.00	-18.07
223.45	46.01	QP	156	1.7	V	-11.62	34.39	46.00	-11.61
4522.81	44.78	PK	291	1.7	H	-2.06	42.72	74.00	-31.28
4522.81	37.49	Ave	291	1.7	H	-2.06	35.43	54.00	-18.57
11490.00	35.66	PK	350	1.8	H	5.93	41.59	68.20	-26.61
11490.00	31.76	Ave	350	1.8	H	5.93	37.69	54.00	-16.31
5386.15	40.26	PK	167	1.8	H	-1.25	39.01	74.00	-34.99
5386.15	38.07	Ave	167	1.8	H	-1.25	36.82	54.00	-17.18

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-3 Middle channel 5785MHz									
223.45	40.43	QP	7	1.7	H	-11.62	28.81	46.00	-17.19
223.45	44.82	QP	192	1.4	V	-11.62	33.20	46.00	-12.80
4502.43	45.87	PK	71	1.8	H	-2.03	43.84	74.00	-30.16
4502.43	37.76	Ave	71	1.8	H	-2.03	35.73	54.00	-18.27
11570.00	32.49	PK	197	1.9	H	5.81	38.30	68.20	-29.90
11570.00	31.76	Ave	197	1.9	H	5.81	37.57	54.00	-16.43
5371.46	46.24	PK	213	1.1	H	-1.22	45.02	74.00	-28.98
5371.46	37.94	Ave	213	1.1	H	-1.22	36.72	54.00	-17.28
802.11n(HT20) U-NII-3 High channel 5825MHz									
223.45	39.74	QP	321	1.3	H	-11.62	28.12	46.00	-17.88
223.45	45.02	QP	135	1.3	V	-11.62	33.40	46.00	-12.60
4503.30	45.87	PK	99	1.3	H	-1.84	44.03	74.00	-29.97
4503.30	36.51	Ave	99	1.3	H	-1.84	34.67	54.00	-19.33
11650.00	39.09	PK	46	1.3	H	5.84	44.93	68.20	-23.27
11650.00	37.79	Ave	46	1.3	H	5.84	43.63	54.00	-10.37
5374.55	45.65	PK	20	1.2	H	-1.30	44.35	74.00	-29.65
5374.55	37.25	Ave	20	1.2	H	-1.30	35.95	54.00	-18.05

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-1 Low Channel 5190MHz									
223.45	36.98	QP	131	1.2	H	-11.62	25.36	46.00	-20.64
223.45	41.59	QP	323	1.1	V	-11.62	29.97	46.00	-16.03
4509.17	37.20	PK	21	1.9	H	-1.89	35.31	74.00	-38.69
4509.17	31.22	Ave	21	1.9	H	-1.89	29.33	54.00	-24.67
5112.50	46.78	PK	100	1.7	H	-1.06	45.72	74.00	-28.28
5112.50	39.36	Ave	100	1.7	H	-1.06	38.30	54.00	-15.70
10380.00	39.76	PK	179	1.3	H	5.26	45.02	74.00	-28.98
10380.00	38.15	Ave	179	1.3	H	5.26	43.41	54.00	-10.59
802.11n(HT40) U-NII-1 High channel 5230MHz									
223.45	36.84	QP	34	1.4	H	-11.62	25.22	46.00	-20.78
223.45	41.75	QP	355	1.1	V	-11.62	30.13	46.00	-15.87
4523.83	36.29	PK	53	1.9	H	-1.94	34.35	74.00	-39.65
4523.83	31.78	Ave	53	1.9	H	-1.94	29.84	54.00	-24.16
5146.88	48.76	PK	70	1.7	H	-1.06	47.70	74.00	-26.30
5146.88	41.22	Ave	70	1.7	H	-1.06	40.16	54.00	-13.84
10460.00	41.29	PK	48	1.3	H	5.28	46.57	74.00	-27.43
10480.00	36.42	Ave	48	1.3	H	5.28	41.70	54.00	-12.30

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-3 Low Channel 5755MHz									
223.45	36.53	QP	317	1.7	H	-11.62	24.91	46.00	-21.09
223.45	39.85	QP	341	1.7	V	-11.62	28.23	46.00	-17.77
4523.61	34.51	PK	66	1.9	H	-1.96	32.55	74.00	-41.45
4523.61	30.08	Ave	66	1.9	H	-1.96	28.12	54.00	-25.88
11510.00	39.68	PK	315	1.7	H	5.88	45.56	68.20	-22.64
11510.00	37.87	Ave	315	1.7	H	5.88	43.75	54.00	-10.25
5387.61	45.33	PK	81	1.3	H	-1.01	44.32	74.00	-29.68
5387.61	38.35	Ave	81	1.3	H	-1.01	37.34	54.00	-16.66
802.11n(HT40) U-NII-3 High channel 5795MHz									
223.45	35.74	QP	51	1.5	H	-11.62	24.12	46.00	-21.88
223.45	39.20	QP	201	1.1	V	-11.62	27.58	46.00	-18.42
4537.47	34.64	PK	123	1.6	H	-1.92	32.72	74.00	-41.28
4537.47	29.94	Ave	123	1.6	H	-1.92	28.02	54.00	-25.98
11590.00	40.33	PK	289	1.6	H	5.63	45.96	68.20	-22.24
11590.00	37.12	Ave	289	1.6	H	5.63	42.75	54.00	-11.25
5380.77	45.56	PK	61	1.2	H	-1.04	44.52	74.00	-29.48
5380.77	39.84	Ave	61	1.2	H	-1.04	38.80	54.00	-15.20

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-1 Low Channel 5180MHz									
223.45	35.93	QP	2	1.7	H	-11.62	24.31	46.00	-21.69
223.45	42.05	QP	322	1.1	V	-11.62	30.43	46.00	-15.57
4500.79	40.58	PK	66	1.5	H	-1.86	38.72	74.00	-35.28
4500.79	36.61	Ave	66	1.5	H	-1.86	34.75	54.00	-19.25
5131.93	47.74	PK	227	1.3	H	-1.06	46.68	74.00	-27.32
5131.93	39.81	Ave	227	1.3	H	-1.06	38.75	54.00	-15.25
10360.00	39.80	PK	259	1.8	H	5.33	45.13	74.00	-28.87
10360.00	36.93	Ave	259	1.8	H	5.33	42.26	54.00	-11.74
802.11ac(HT20) U-NII-1 Middle channel 5200MHz									
223.45	36.73	QP	162	1.3	H	-11.62	25.11	46.00	-20.89
223.45	42.99	QP	186	1.1	V	-11.62	31.37	46.00	-14.63
4513.23	41.25	PK	306	1.5	H	-1.82	39.43	74.00	-34.57
4513.23	36.04	Ave	306	1.5	H	-1.82	34.22	54.00	-19.78
5131.18	47.94	PK	313	1.8	H	-1.06	46.88	74.00	-27.12
5131.18	38.82	Ave	313	1.8	H	-1.06	37.76	54.00	-16.24
10400.00	41.21	PK	31	1.6	H	5.21	46.42	74.00	-27.58
10400.00	37.29	Ave	31	1.6	H	5.21	42.50	54.00	-11.50

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-1 High channel 5240MHz									
223.45	37.03	QP	354	1.9	H	-11.62	25.41	46.00	-20.59
223.45	43.81	QP	130	1.8	V	-11.62	32.19	46.00	-13.81
4523.81	42.23	PK	287	1.1	H	-1.81	40.42	74.00	-33.58
4523.81	35.28	Ave	287	1.1	H	-1.81	33.47	54.00	-20.53
5128.53	48.32	PK	33	1.1	H	-1.06	47.26	74.00	-26.74
5128.53	40.41	Ave	33	1.1	H	-1.06	39.35	54.00	-14.65
10480.00	40.72	PK	79	1.8	H	5.14	45.86	74.00	-28.14
10480.00	36.82	Ave	79	1.8	H	5.14	41.96	54.00	-12.04
802.11ac(HT20) U-NII-3 Low Channel 5745MHz									
223.45	37.58	QP	195	1.5	H	-11.62	25.96	46.00	-20.04
223.45	43.28	QP	259	1.4	V	-11.62	31.66	46.00	-14.34
4509.55	41.10	PK	345	2.0	H	-1.92	39.18	74.00	-34.82
4509.55	33.35	Ave	345	2.0	H	-1.92	31.43	54.00	-22.57
11490.00	38.05	PK	118	1.1	H	5.93	43.98	68.20	-24.22
11490.00	34.58	Ave	118	1.1	H	5.93	40.51	54.00	-13.49
5350.49	46.01	PK	35	1.6	H	-1.03	44.98	74.00	-29.02
5350.49	38.02	Ave	35	1.6	H	-1.03	36.99	54.00	-17.01

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-3 Middle channel 5785MHz									
223.45	37.88	QP	311	1.1	H	-11.62	26.26	46.00	-19.74
223.45	43.03	QP	106	2.0	V	-11.62	31.41	46.00	-14.59
4519.20	40.82	PK	340	1.9	H	-1.97	38.85	74.00	-35.15
4519.20	33.77	Ave	340	1.9	H	-1.97	31.80	54.00	-22.20
11570.00	39.79	PK	7	1.2	H	5.81	45.60	68.20	-22.60
11570.00	37.76	Ave	7	1.2	H	5.81	43.57	54.00	-10.43
5389.21	46.51	PK	242	1.3	H	-1.05	45.46	74.00	-28.54
5389.21	38.38	Ave	242	1.3	H	-1.05	37.33	54.00	-16.67
802.11ac(HT20) U-NII-3 High channel 5825MHz									
223.45	38.04	QP	257	1.4	H	-11.62	26.42	46.00	-19.58
223.45	43.54	QP	122	1.0	V	-11.62	31.92	46.00	-14.08
4533.84	40.55	PK	57	1.3	H	-1.88	38.67	74.00	-35.33
4533.84	33.78	Ave	57	1.3	H	-1.88	31.90	54.00	-22.10
11650.00	40.74	PK	186	1.4	H	5.84	46.58	68.20	-21.62
11650.00	37.91	Ave	186	1.4	H	5.84	43.75	54.00	-10.25
5383.07	45.95	PK	123	1.5	H	-1.06	44.89	74.00	-29.11
5383.07	37.14	Ave	123	1.5	H	-1.06	36.08	54.00	-17.92

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-1 Low Channel 5190MHz									
223.45	35.93	QP	332	1.8	H	-11.62	24.31	46.00	-21.69
223.45	40.04	QP	243	1.6	V	-11.62	28.42	46.00	-17.58
4537.26	32.00	PK	311	1.3	H	-1.91	30.09	74.00	-43.91
4537.26	27.90	Ave	311	1.3	H	-1.91	25.99	54.00	-28.01
5143.69	44.19	PK	208	1.4	H	-1.06	43.13	74.00	-30.87
5143.69	41.26	Ave	208	1.4	H	-1.06	40.20	54.00	-13.80
10380.00	41.49	PK	95	1.3	H	5.26	46.75	74.00	-27.25
10380.00	38.09	Ave	95	1.3	H	5.26	43.35	54.00	-10.65
802.11ac(HT40) U-NII-1 High channel 5230MHz									
223.45	36.93	QP	321	1.1	H	-11.62	25.31	46.00	-20.69
223.45	40.24	QP	132	1.4	V	-11.62	28.62	46.00	-17.38
4523.51	31.65	PK	75	1.2	H	-1.93	29.72	74.00	-44.28
4523.51	27.09	Ave	75	1.2	H	-1.93	25.16	54.00	-28.84
5113.49	46.17	PK	138	1.0	H	-1.06	45.11	74.00	-28.89
5113.49	41.03	Ave	138	1.0	H	-1.06	39.97	54.00	-14.03
10460.00	41.10	PK	141	1.5	H	5.28	46.38	74.00	-27.62
10480.00	37.40	Ave	141	1.5	H	5.28	42.68	54.00	-11.32

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-3 Low Channel 5755MHz									
223.45	36.97	QP	312	1.2	H	-11.62	25.35	46.00	-20.65
223.45	38.76	QP	219	2.0	V	-11.62	27.14	46.00	-18.86
4513.98	29.73	PK	330	1.8	H	-1.92	27.81	74.00	-46.19
4513.98	23.99	Ave	330	1.8	H	-1.92	22.07	54.00	-31.93
11510.00	40.37	PK	104	1.6	H	5.88	46.25	68.20	-21.95
11510.00	38.23	Ave	104	1.6	H	5.88	44.11	54.00	-9.89
5375.33	46.80	PK	85	1.8	H	-1.07	45.73	74.00	-28.27
5375.33	37.00	Ave	85	1.8	H	-1.07	35.93	54.00	-18.07
802.11ac(HT40) U-NII-3 High channel 5795MHz									
223.45	37.90	QP	104	1.3	H	-11.62	26.28	46.00	-19.72
223.45	38.82	QP	314	1.9	V	-11.62	27.20	46.00	-18.80
4533.71	29.48	PK	332	1.9	H	-1.86	27.62	74.00	-46.38
4533.71	24.01	Ave	332	1.9	H	-1.86	22.15	54.00	-31.85
11590.00	41.02	PK	27	1.8	H	5.63	46.65	68.20	-21.55
11590.00	36.42	Ave	27	1.8	H	5.63	42.05	54.00	-11.95
5370.92	46.66	PK	13	1.2	H	-1.03	45.63	74.00	-28.37
5370.92	39.86	Ave	13	1.2	H	-1.03	38.83	54.00	-15.17

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT80) U-NII-1 Middle Channel 5210MHz									
223.45	43.02	QP	59	1.4	H	-11.62	31.40	46.00	-14.60
4539.02	44.08	QP	320	1.9	V	-11.62	32.46	46.00	-13.54
4513.07	41.43	PK	273	1.2	H	-1.88	39.55	74.00	-34.45
4513.07	44.53	Ave	273	1.2	H	-1.88	42.65	54.00	-11.35
5121.99	36.13	PK	359	1.3	H	-1.06	35.07	74.00	-38.93
5121.99	36.68	Ave	359	1.3	H	-1.06	35.62	54.00	-18.38
10420.00	45.45	PK	52	2.0	H	4.65	50.10	74.00	-23.90
10420.00	38.33	Ave	52	2.0	H	4.65	42.98	54.00	-11.02
802.11ac(HT80) U-NII-3 Middle Channel 5775MHz									
4500.55	37.41	QP	268	1.1	H	-11.62	25.79	46.00	-20.21
4511.17	41.67	QP	330	1.5	V	-11.62	30.05	46.00	-15.95
4518.72	43.70	PK	213	1.9	H	-1.85	41.85	74.00	-32.15
4518.72	36.49	Ave	213	1.9	H	-1.85	34.64	54.00	-19.36
11550.00	40.59	PK	129	1.1	H	4.83	45.42	68.20	-22.78
11550.00	37.60	Ave	129	1.1	H	4.83	42.43	54.00	-11.57
5354.73	45.36	PK	207	1.6	H	-1.14	44.22	74.00	-29.78
5354.73	37.62	Ave	207	1.6	H	-1.14	36.48	54.00	-17.52

Test Frequency: 18GHz~40GHz

The measurements were more than 20 dB below the limit and not reported.

9 Duty cycle

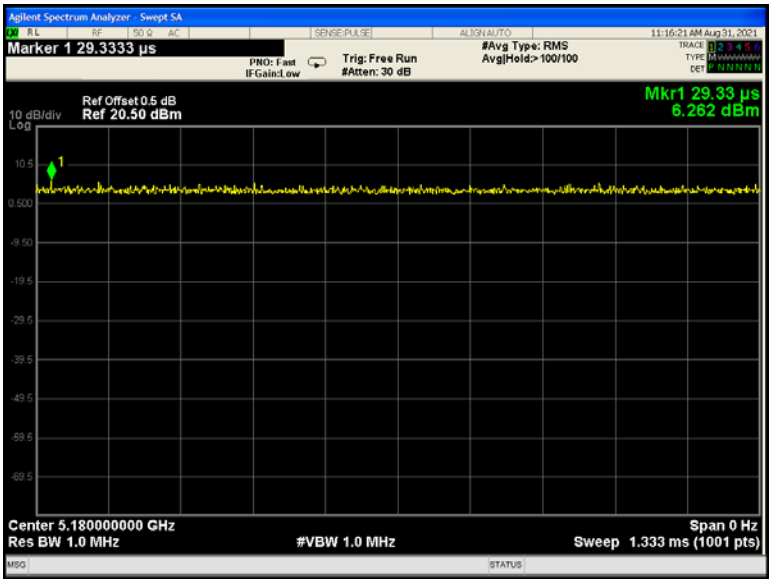
Test Requirement:	47 CFR Part 15C 15.407 KDB789033 D02 General U-NII Test Procedures New Rules v02r01, Section (B)
Test Method:	ANSI C63.10: 2013
Test Limit:	N/A
Test Result:	PASS
Remark:	Through Pre-scan, and found 802.11a at lowest channel is the worst case. Only the worst case is recorded in the report.

9.1 Summary of Test Results

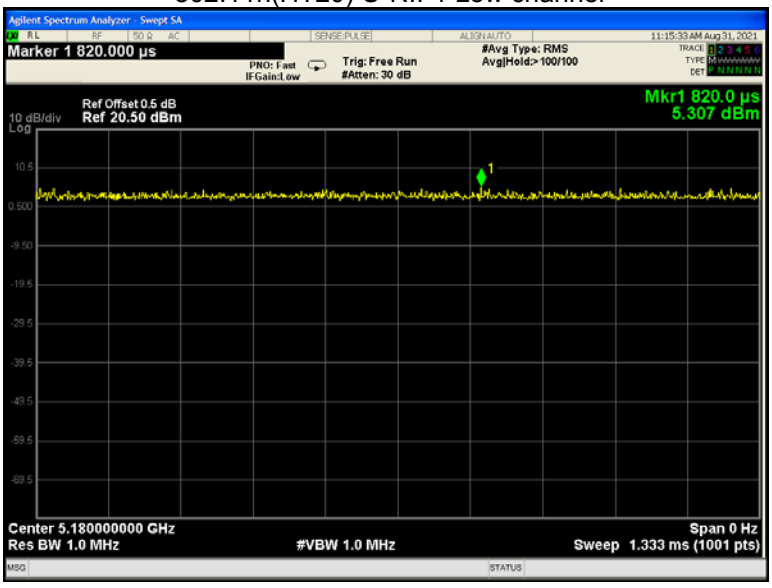
802.11a mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
149	100	100	100
802.11n(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
149	100	100	100
802.11n(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
151	100	100	100
802.11ac(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
149	100	100	100
802.11ac(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
151	100	100	100
802.11ac(HT80) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
42	100	100	100
155	100	100	100

Test result plots shown as follows:

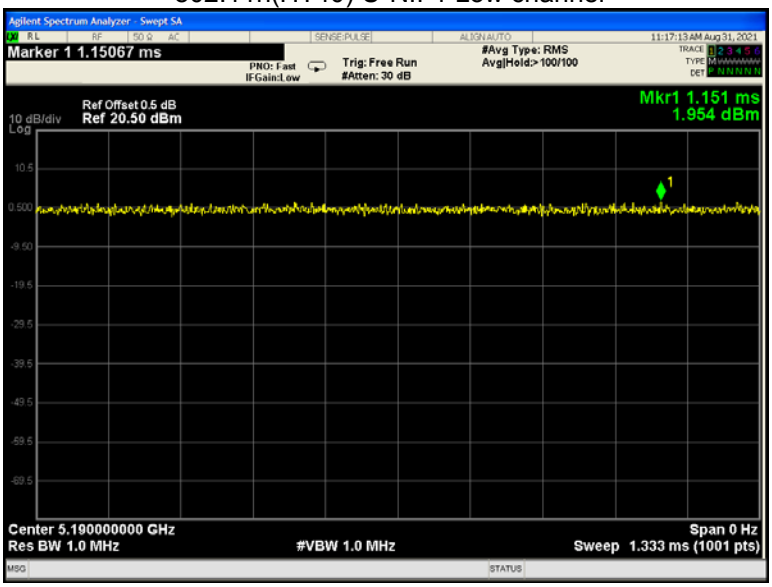
802.11a U-NII-1 Low channel



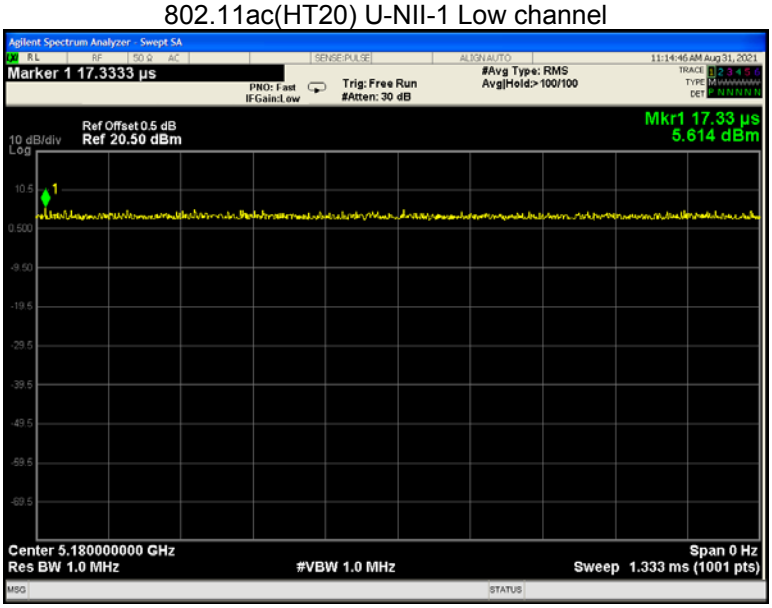
802.11n(HT20) U-NII-1 Low channel



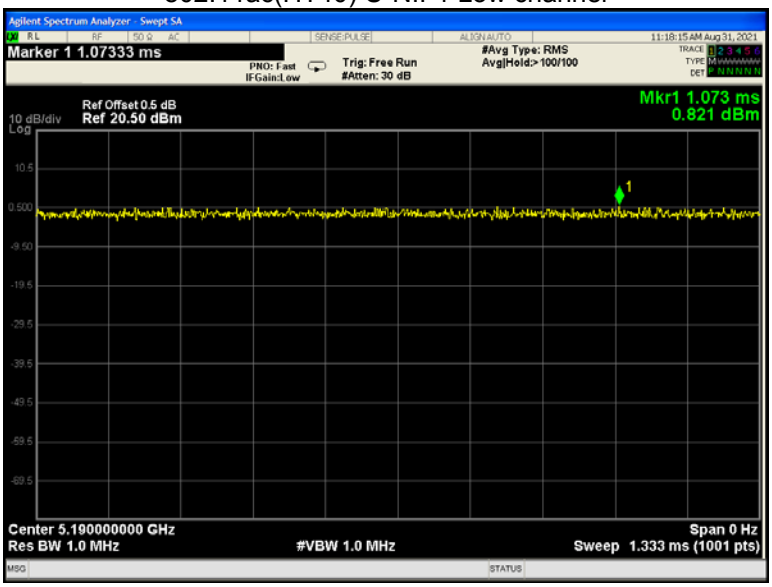
802.11n(HT40) U-NII-1 Low channel



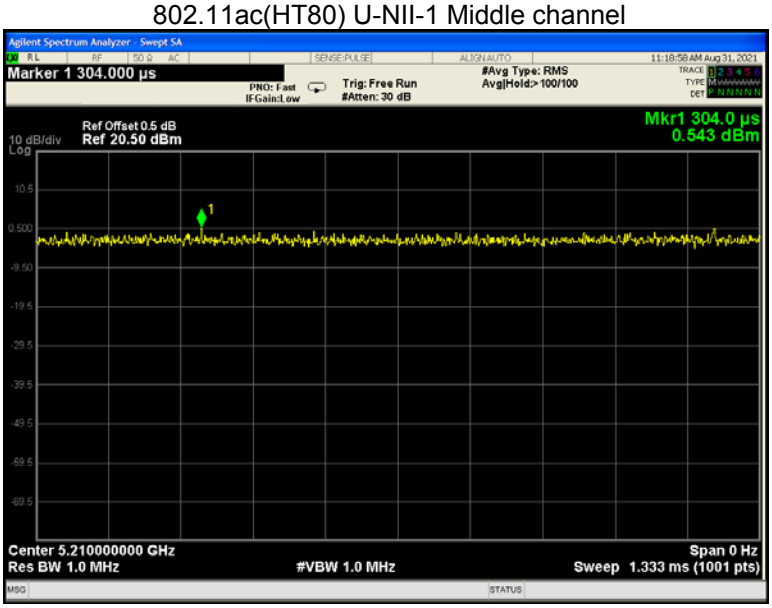
802.11ac(HT20) U-NII-1 Low channel



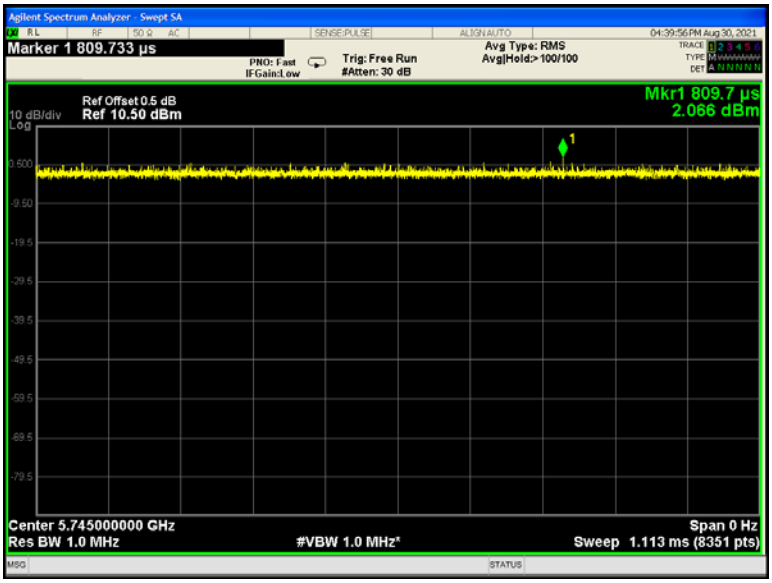
802.11ac(HT40) U-NII-1 Low channel



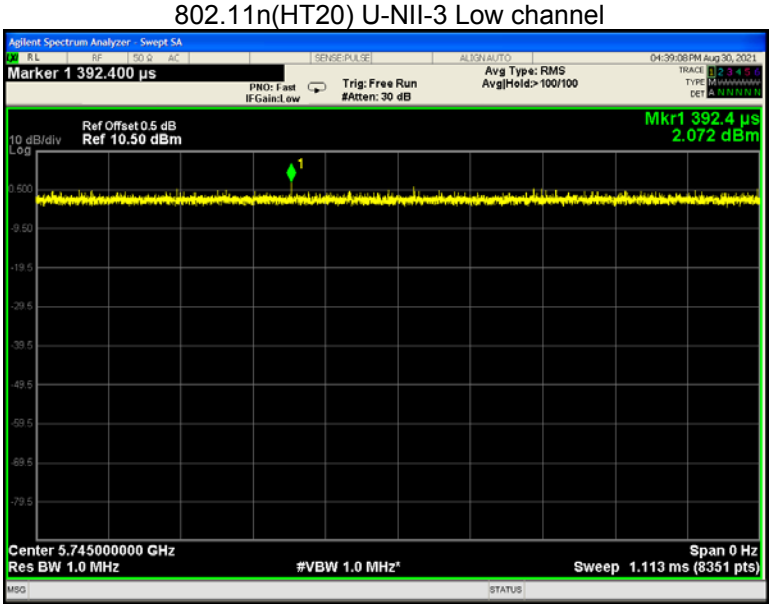
802.11ac(HT80) U-NII-1 Middle channel



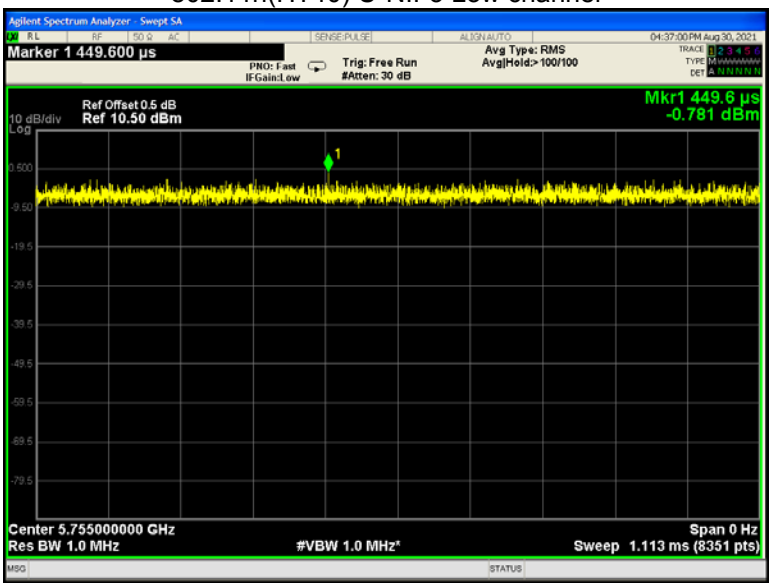
802.11a U-NII-3 Low channel



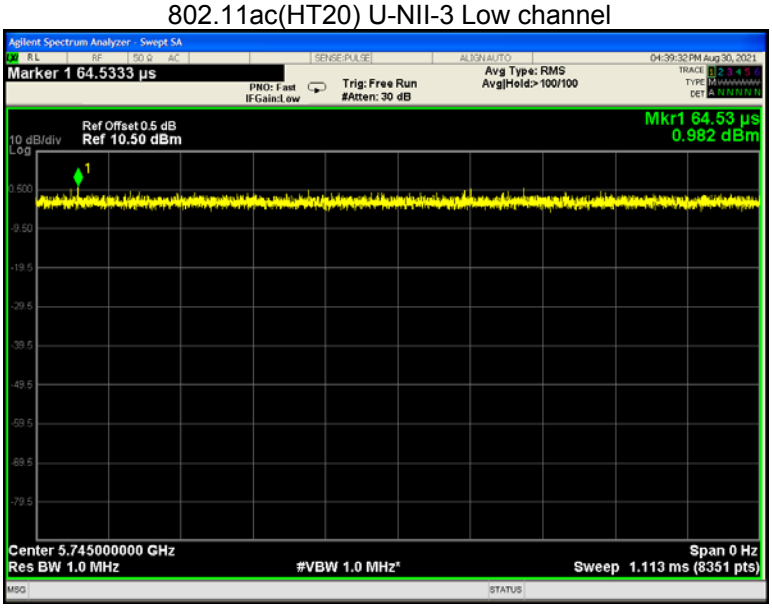
802.11n(HT20) U-NII-3 Low channel



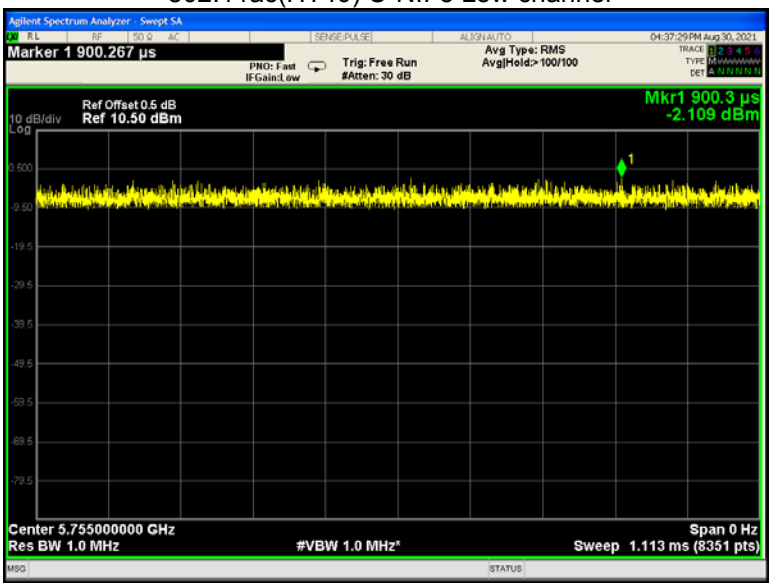
802.11n(HT40) U-NII-3 Low channel



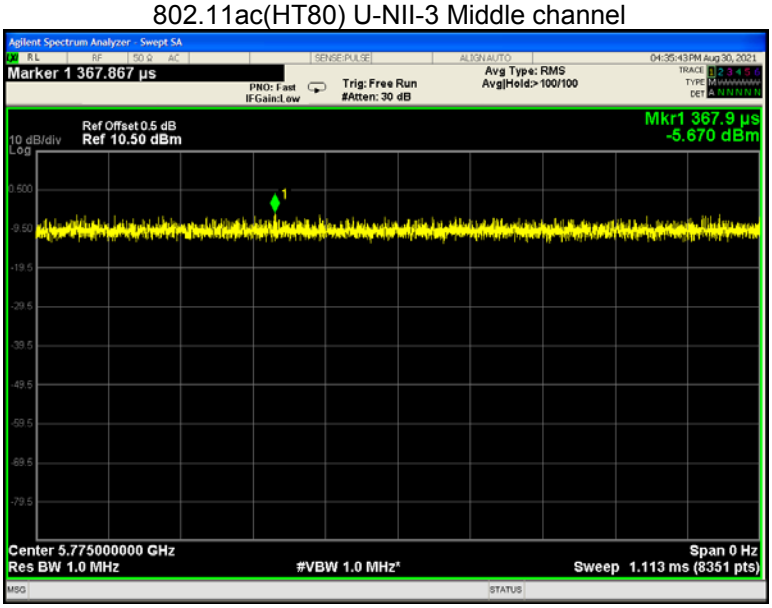
802.11ac(HT20) U-NII-3 Low channel



802.11ac(HT40) U-NII-3 Low channel



802.11ac(HT80) U-NII-3 Middle channel



10 Band Edge

Test Requirement:	FCC CFR47 Part 15 Section 15.407
Test Method:	ANSI C63.10 2013
Test Limit:	(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27dBm/MHz. (2) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.
Test Result:	PASS

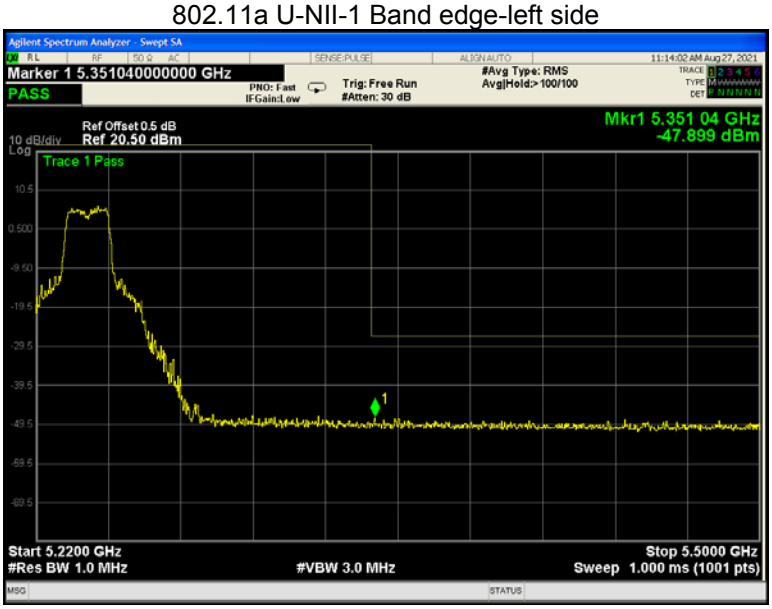
10.1 Test Produce

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

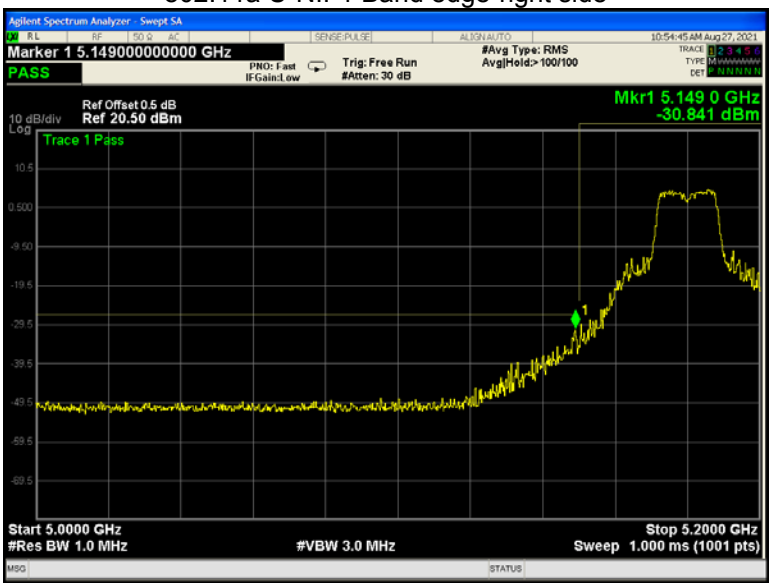
10.2 Test Result

Test result plots shown as follows:

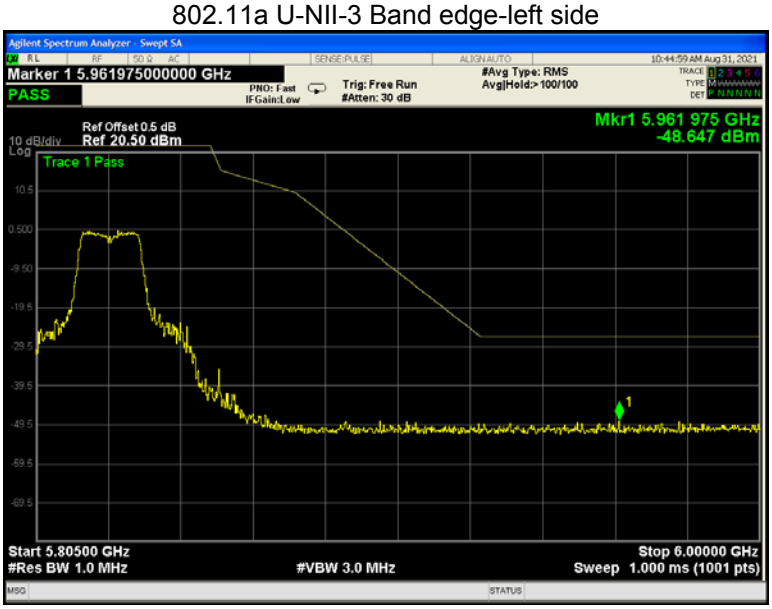
802.11a U-NII-1 Band edge-left side



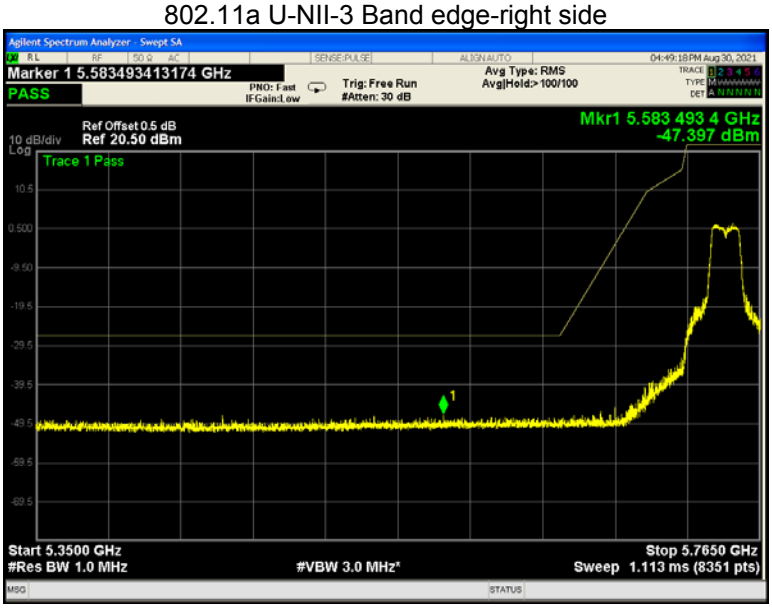
802.11a U-NII-1 Band edge-right side



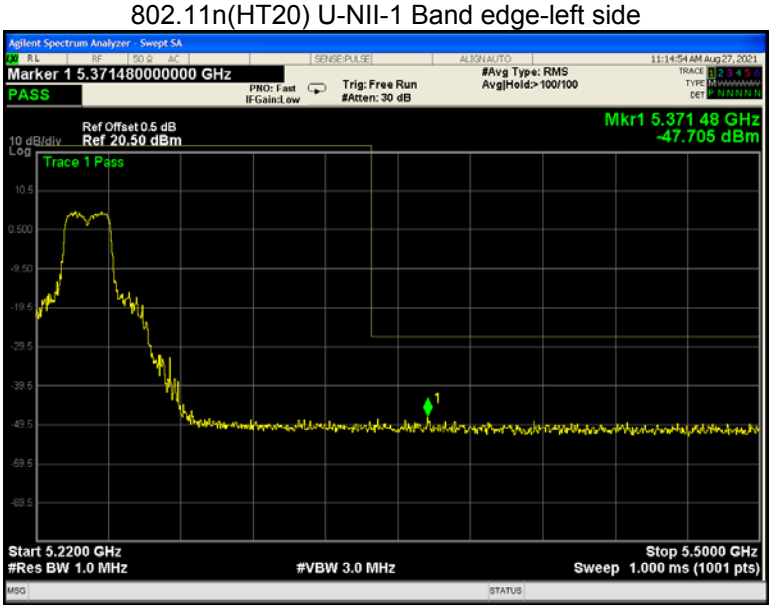
802.11a U-NII-3 Band edge-left side



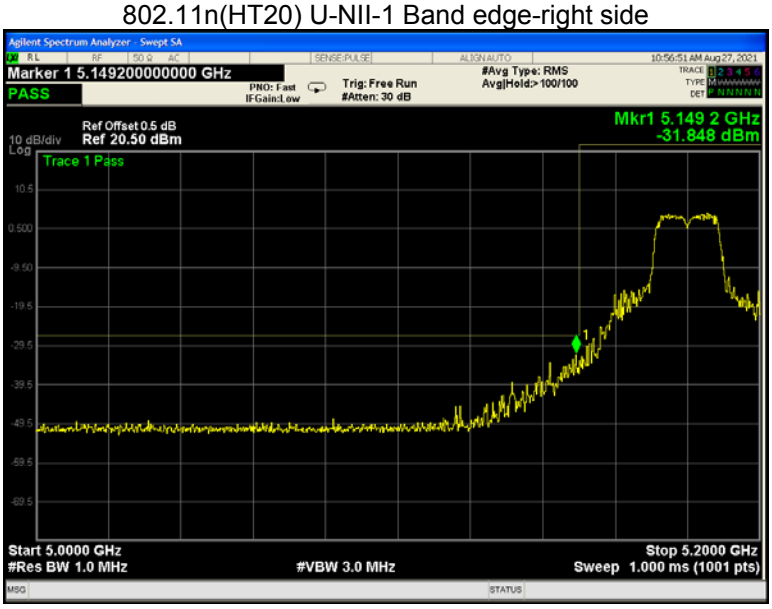
802.11a U-NII-3 Band edge-right side



802.11n(HT20) U-NII-1 Band edge-left side

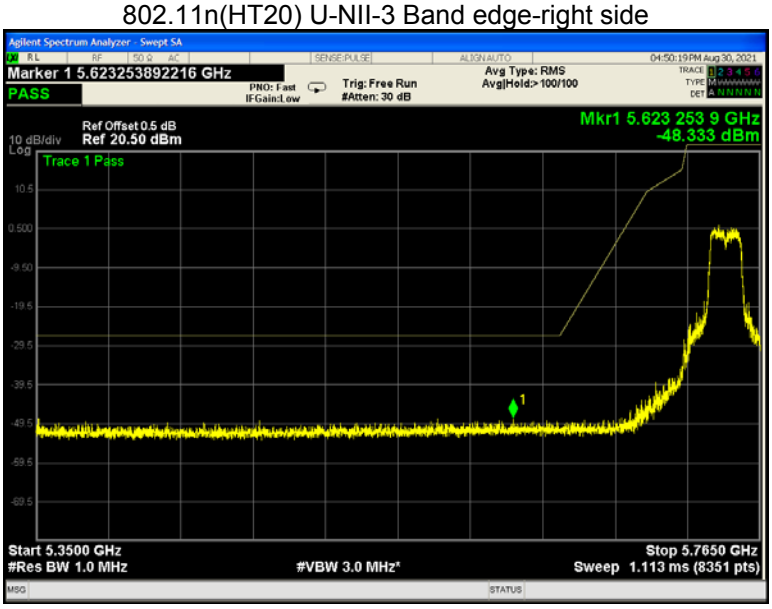


802.11n(HT20) U-NII-1 Band edge-right side

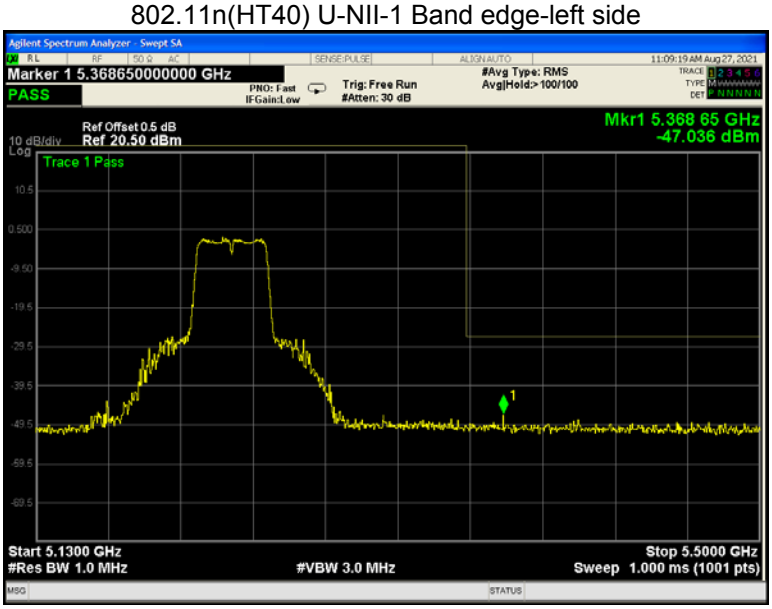


802.11n(HT20) U-NII-3 Band edge-left side

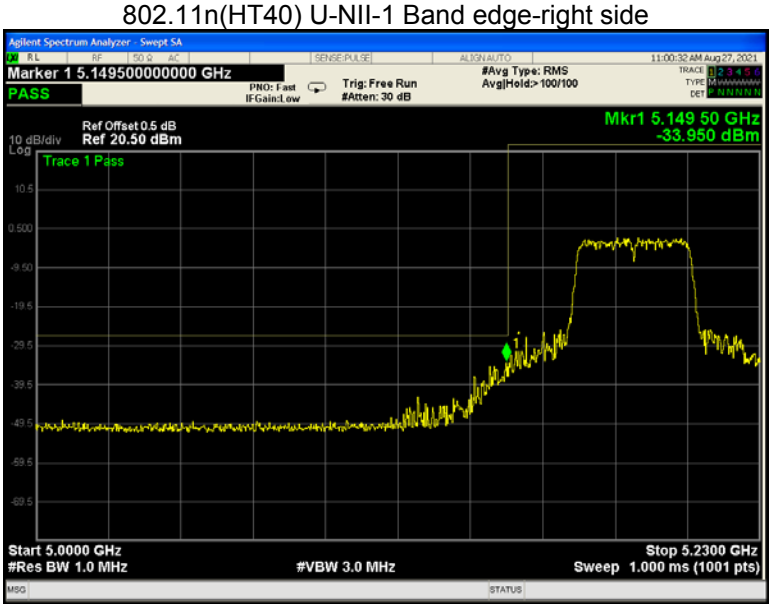
802.11n(HT20) U-NII-3 Band edge-right side



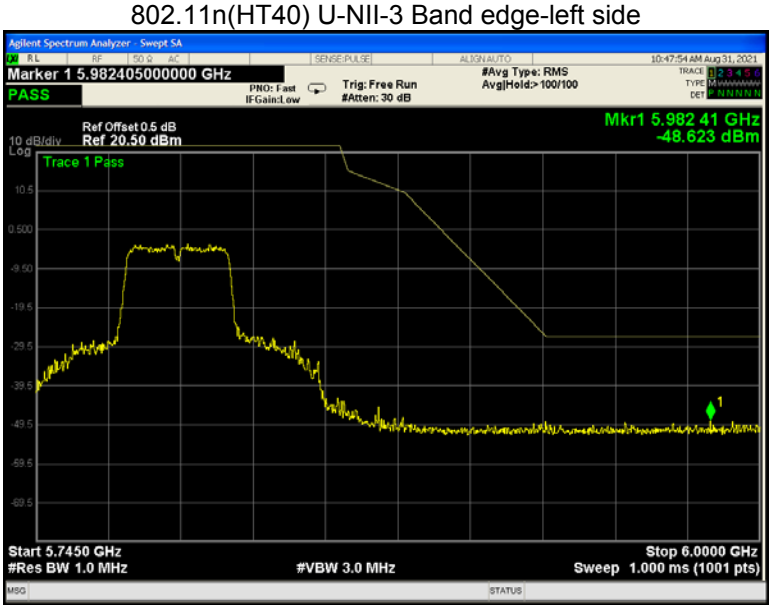
802.11n(HT40) U-NII-1 Band edge-left side



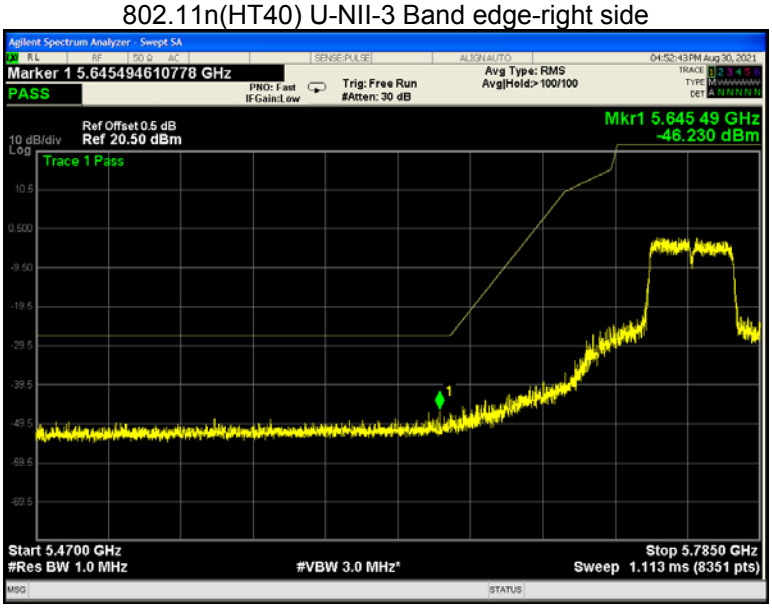
802.11n(HT40) U-NII-1 Band edge-right side



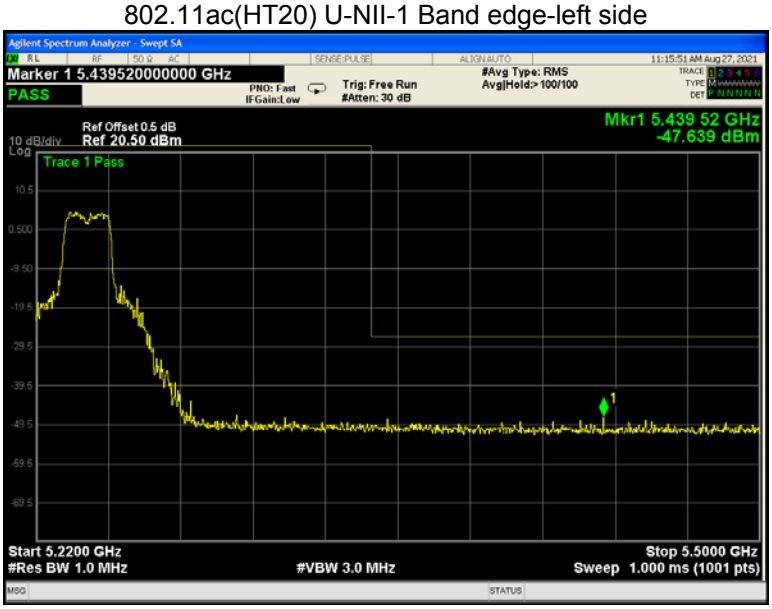
802.11n(HT40) U-NII-3 Band edge-left side



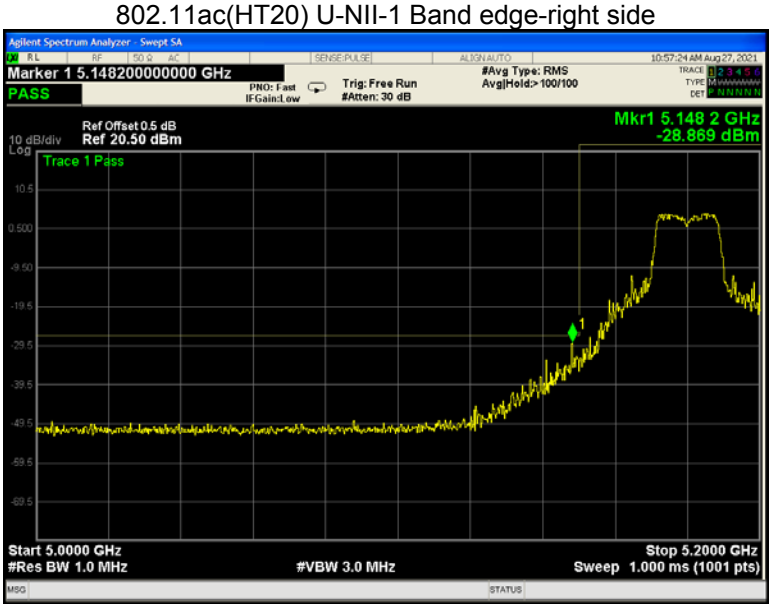
802.11n(HT40) U-NII-3 Band edge-right side



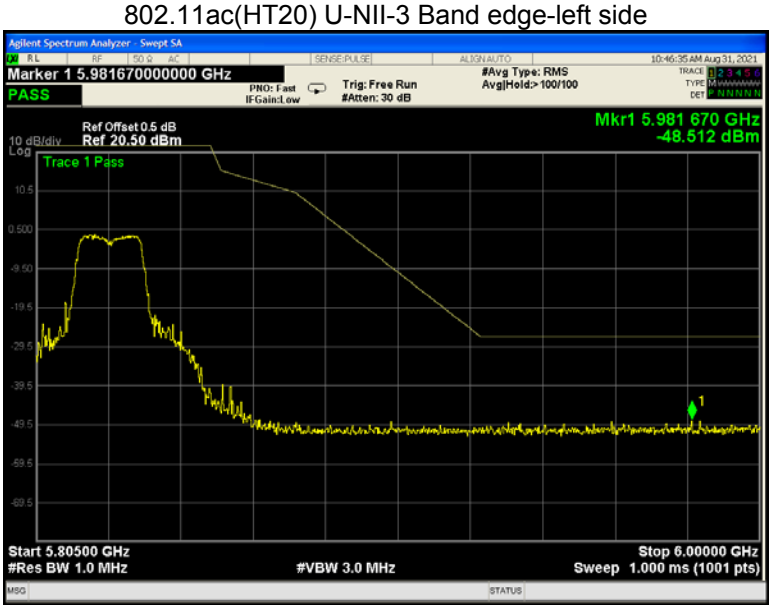
802.11ac(HT20) U-NII-1 Band edge-left side



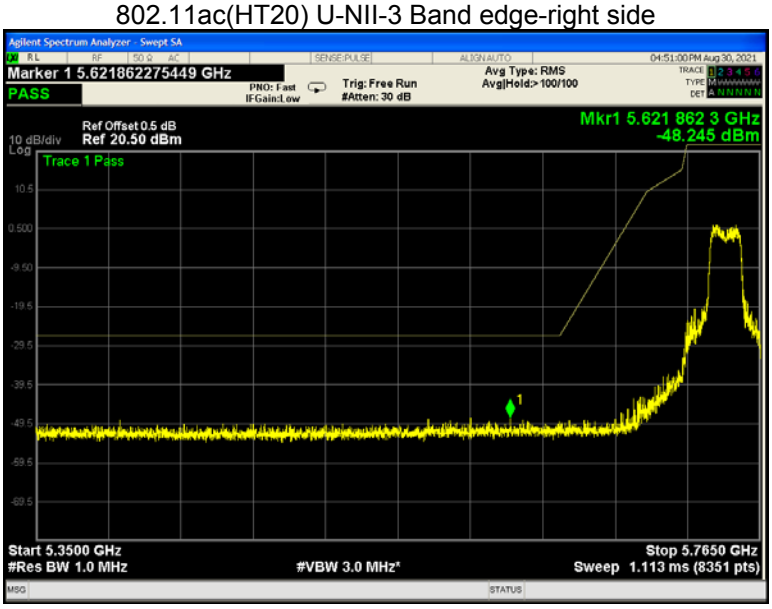
802.11ac(HT20) U-NII-1 Band edge-right side



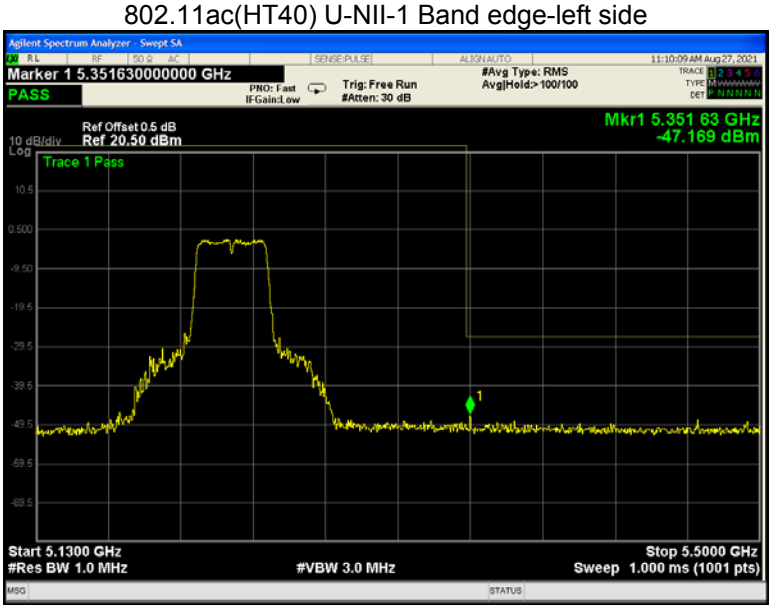
802.11ac(HT20) U-NII-3 Band edge-left side



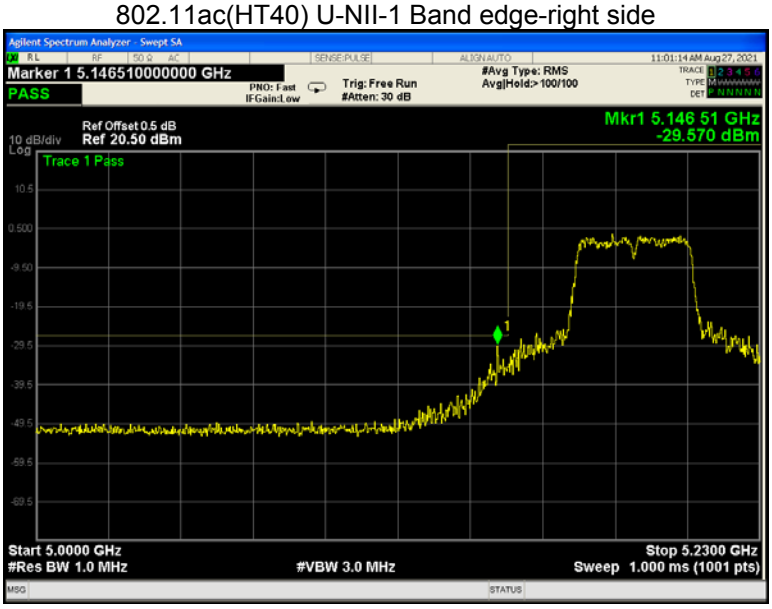
802.11ac(HT20) U-NII-3 Band edge-right side



802.11ac(HT40) U-NII-1 Band edge-left side

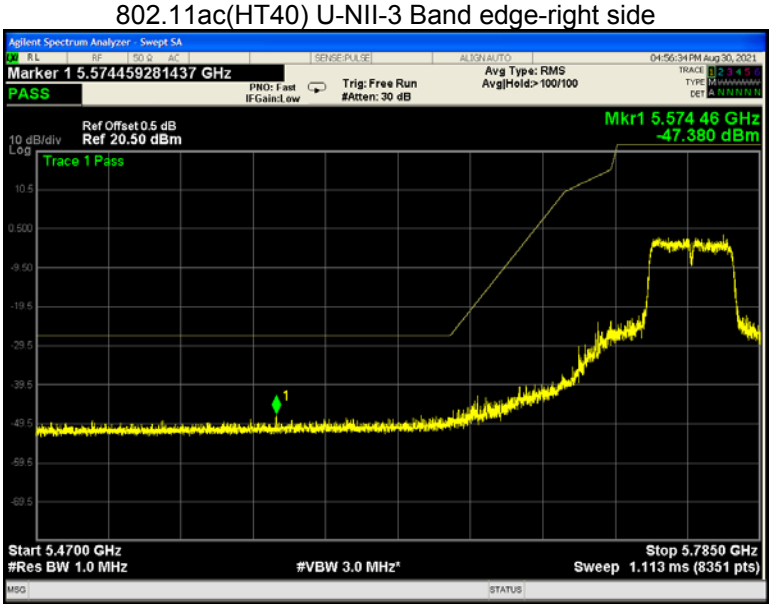


802.11ac(HT40) U-NII-1 Band edge-right side

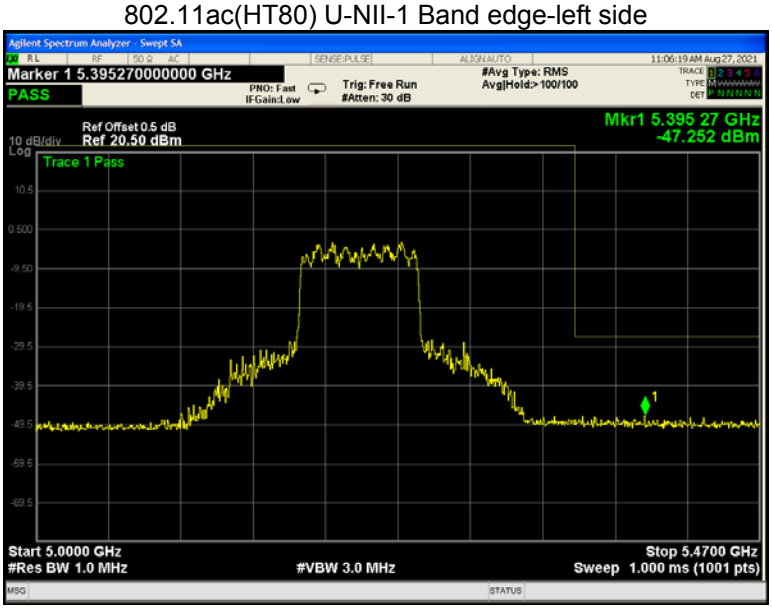


802.11ac(HT40) U-NII-3 Band edge-left side

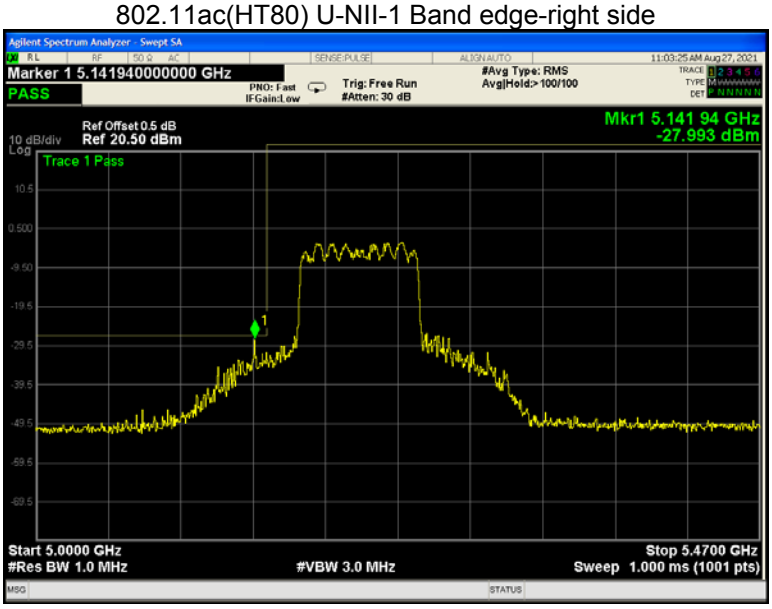
802.11ac(HT40) U-NII-3 Band edge-right side



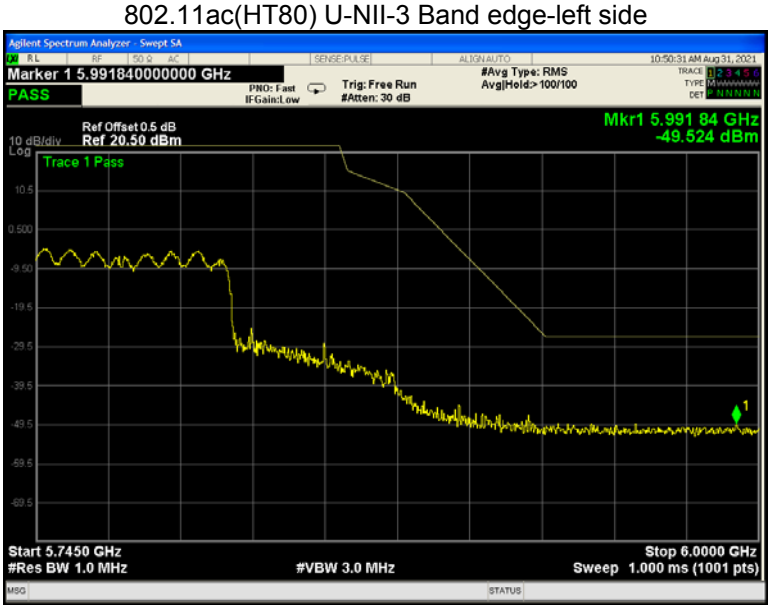
802.11ac(HT80) U-NII-1 Band edge-left side



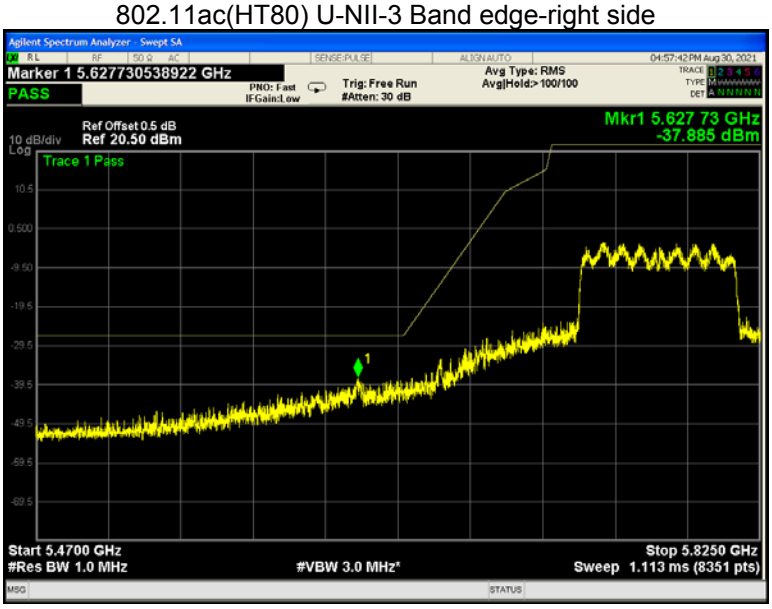
802.11ac(HT80) U-NII-1 Band edge-right side



802.11ac(HT80) U-NII-3 Band edge-left side



802.11ac(HT80) U-NII-3 Band edge-right side



11 6 dB Bandwidth

Test Requirement:	FCC CFR47 Part 15 Section 15.407(e)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section C
Test Limit:	≥ 500 kHz
Test Result:	PASS

11.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

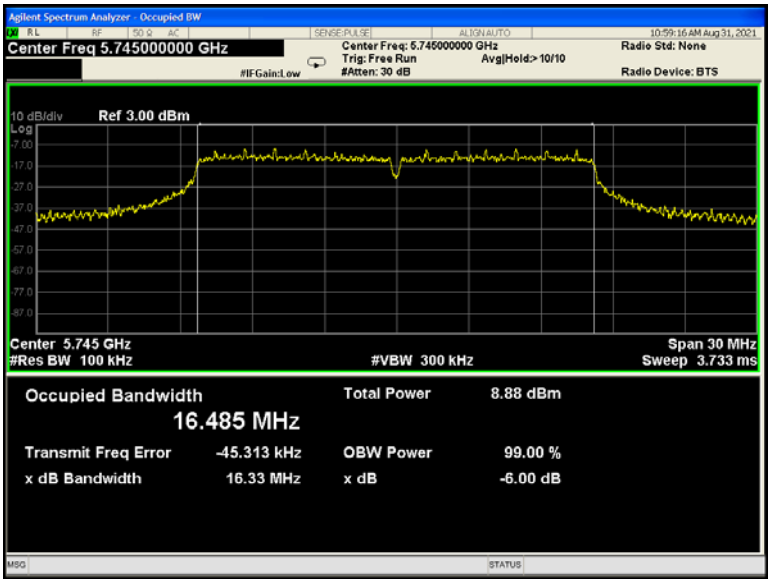
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

11.2 Test Result:

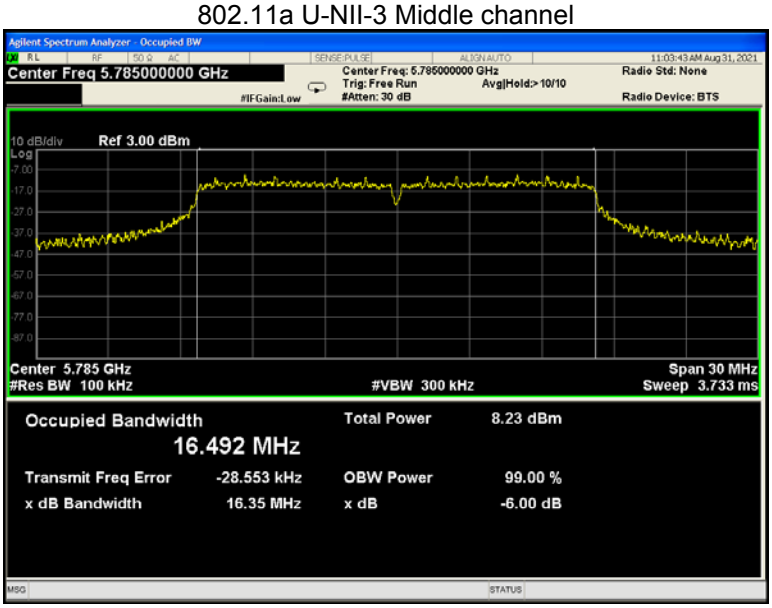
Band	Operation mode	6 dB Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.33	16.35	16.36
	802.11n(HT20)	17.30	17.27	17.24
	802.11n(HT40)	35.46	/	35.47
	802.11ac(HT20)	17.06	17.55	17.28
	802.11ac(HT40)	36.01	/	35.73
	802.11ac(HT80)	/	75.12	/

Test result plots shown as follows:

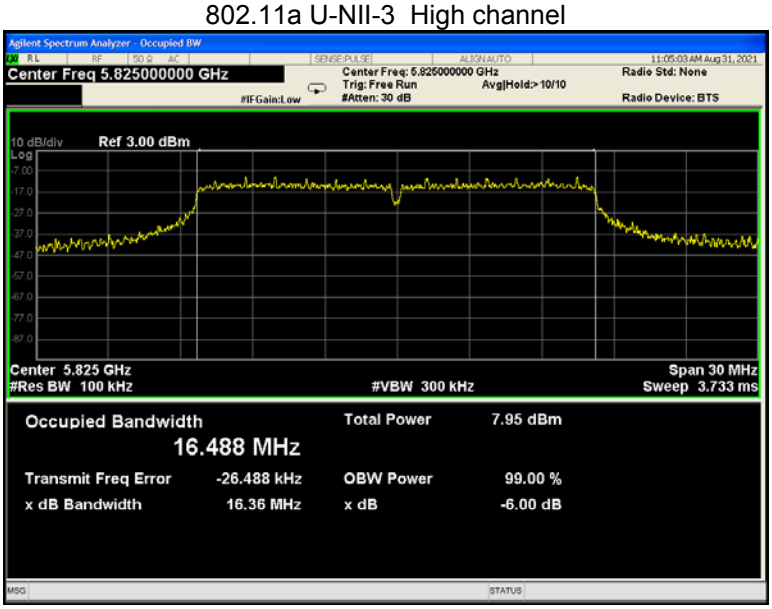
802.11a U-NII-3 Low channel



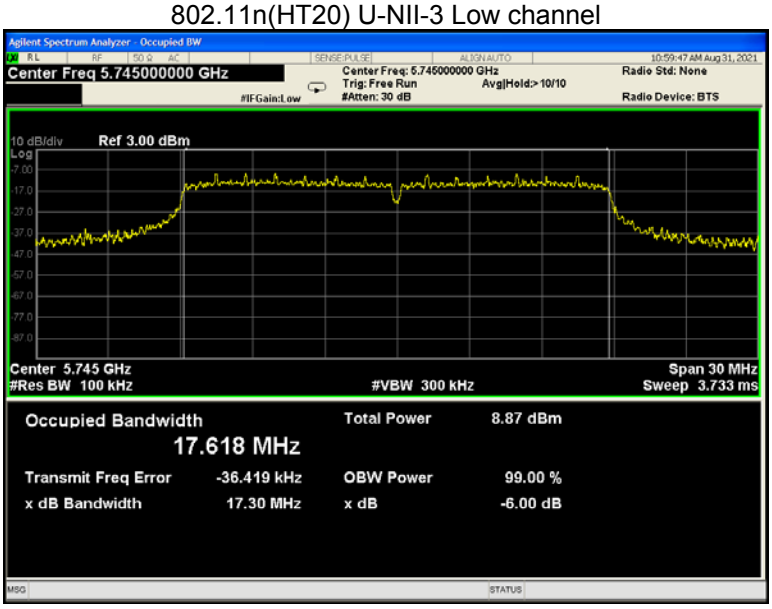
802.11a U-NII-3 Middle channel



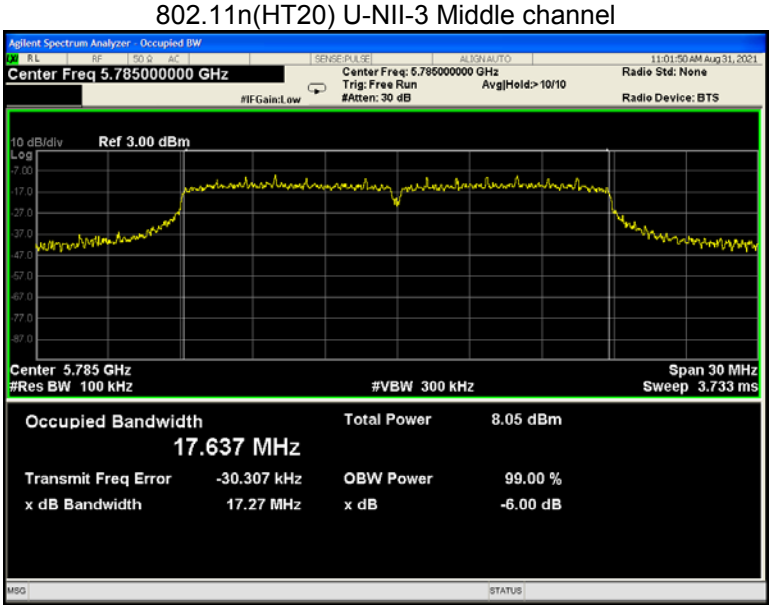
802.11a U-NII-3 High channel



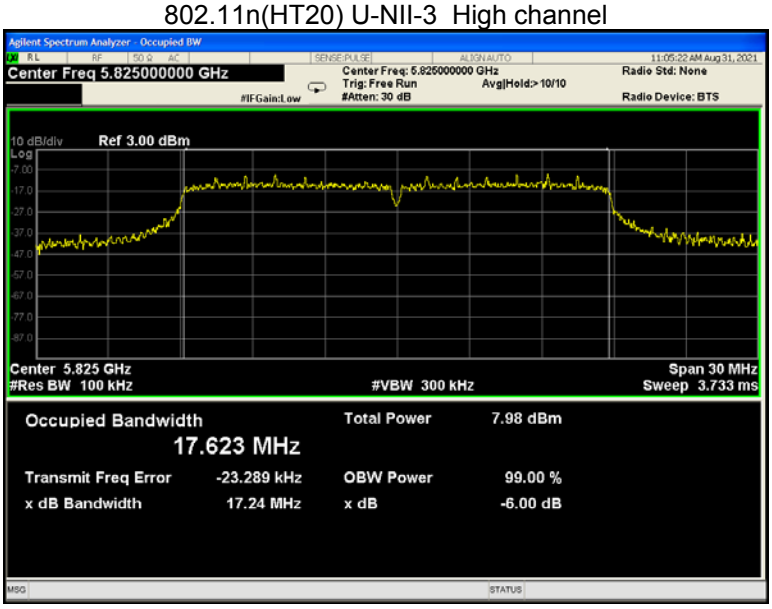
802.11n(HT20) U-NII-3 Low channel



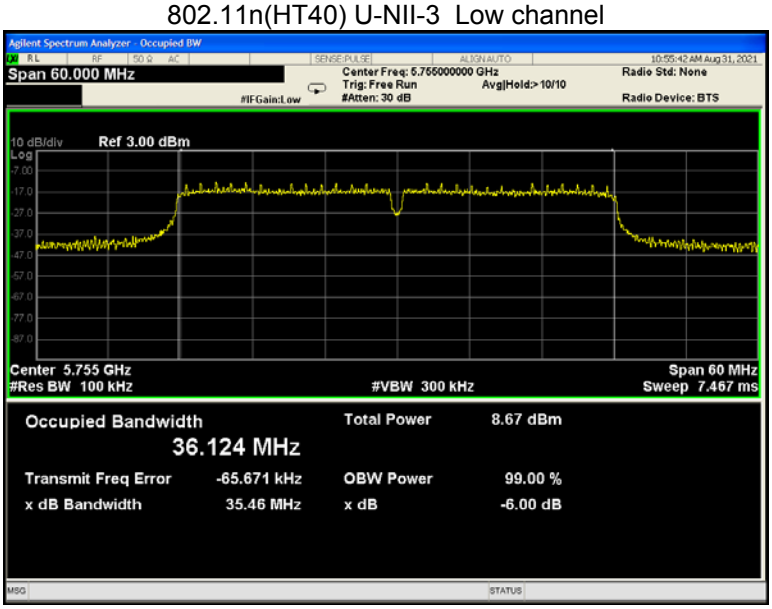
802.11n(HT20) U-NII-3 Middle channel



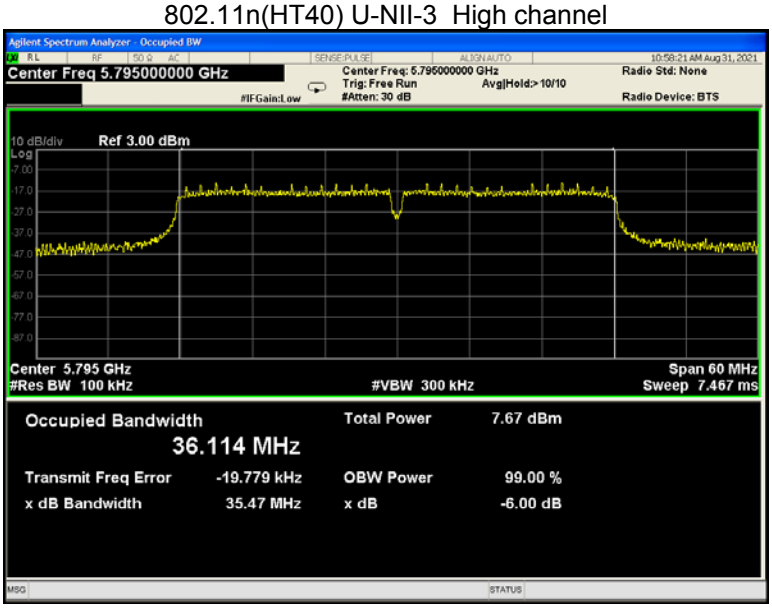
802.11n(HT20) U-NII-3 High channel



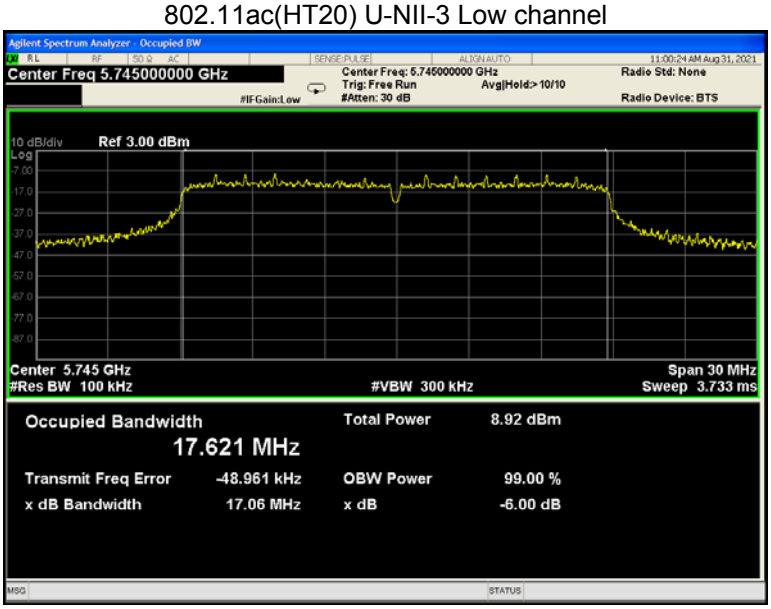
802.11n(HT40) U-NII-3 Low channel



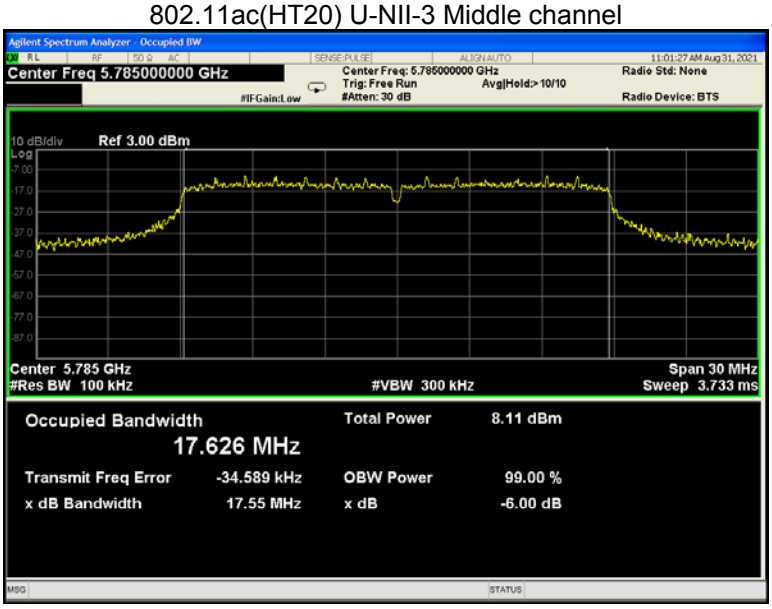
802.11n(HT40) U-NII-3 High channel



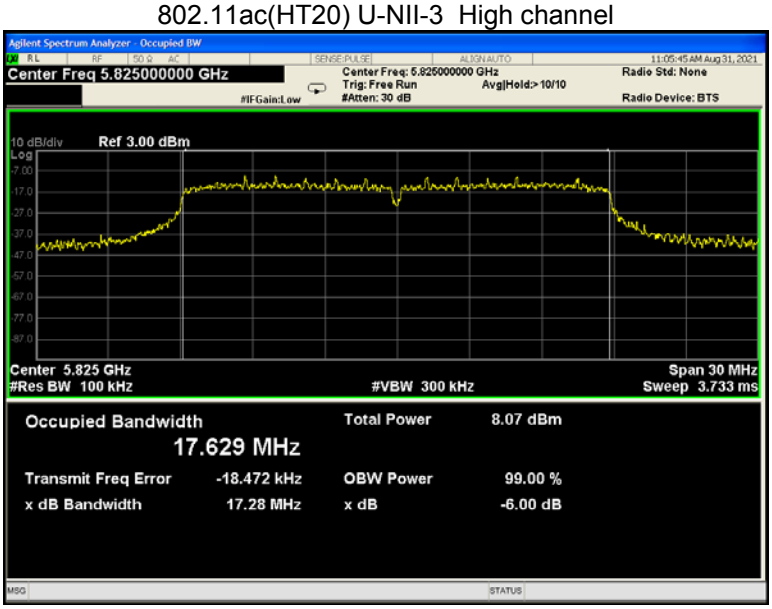
802.11ac(HT20) U-NII-3 Low channel



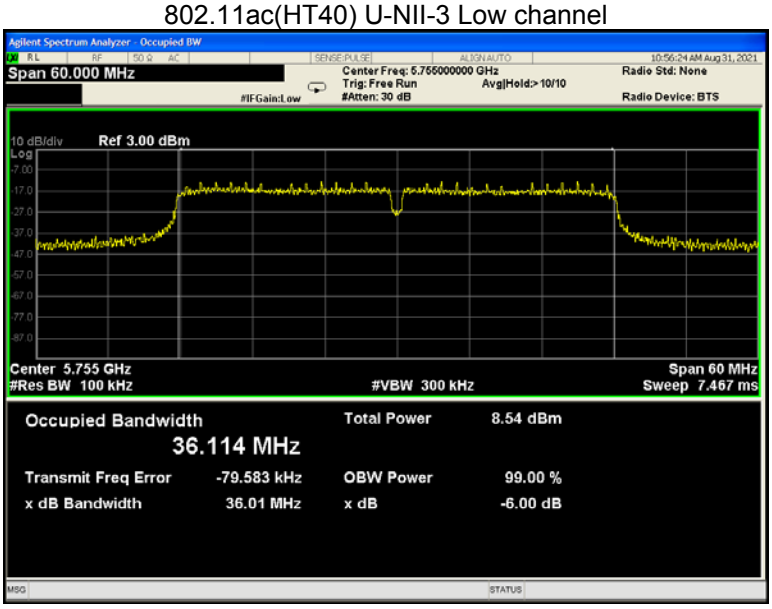
802.11ac(HT20) U-NII-3 Middle channel



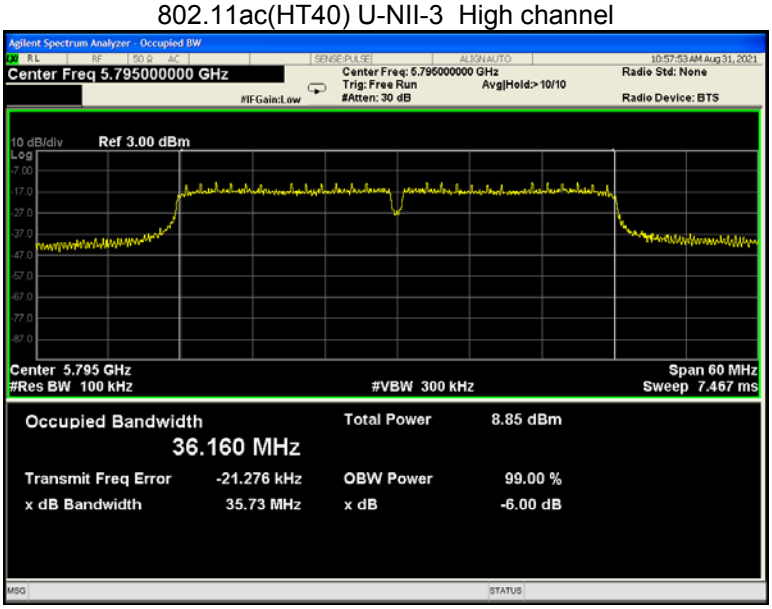
802.11ac(HT20) U-NII-3 High channel



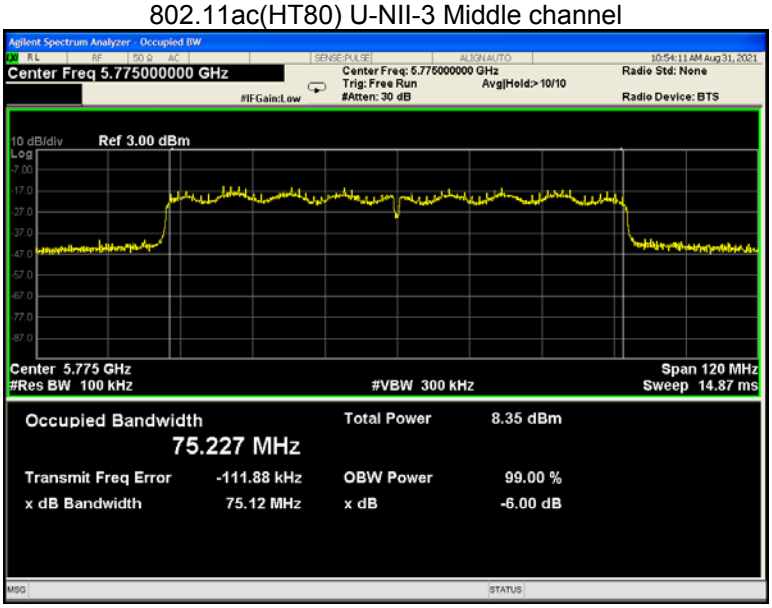
802.11ac(HT40) U-NII-3 Low channel



802.11ac(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Middle channel



12 26 dB Bandwidth and 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section D
Test Limit:	No restriction limits
Test Result:	PASS

12.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

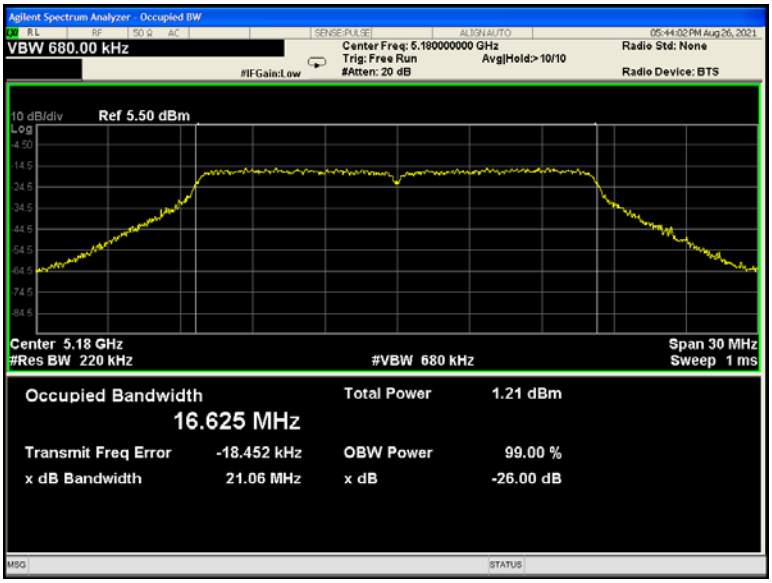
2. Set the spectrum analyzer: RBW = 1% to 5% of the OBW, VBW = 3x RBW

12.2 Test Result:

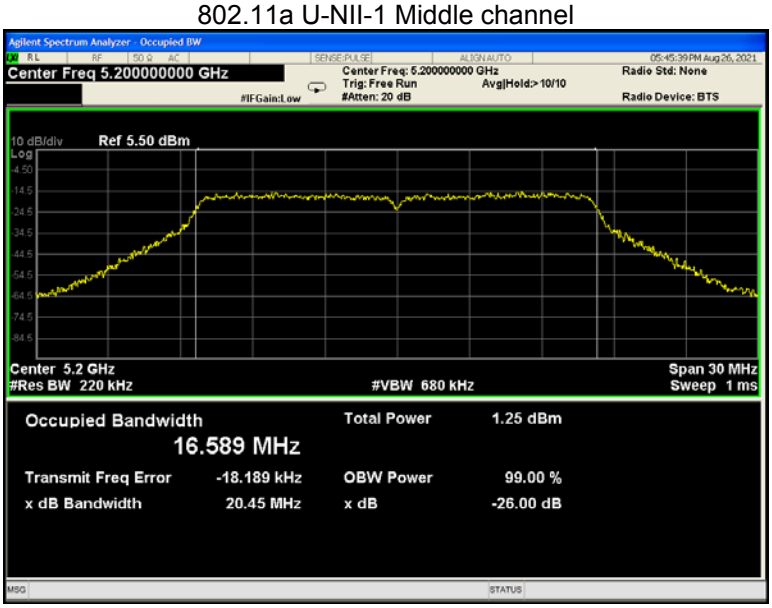
Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-1	802.11a	21.06	20.45	20.69	16.625	16.589	16.586
	802.11n(HT20)	21.13	21.12	21.06	17.653	17.654	17.640
	802.11n(HT40)	42.04	/	40.94	36.141	/	36.140
	802.11ac(HT20)	21.05	21.23	21.04	17.633	17.657	17.670
	802.11ac(HT40)	41.20	/	41.87	36.155	/	36.164
	802.11ac(HT80)	/	80.07	/	/	74.999	/
U-NII-3	802.11a	16.39	16.37	16.37	16.646	16.672	16.666
	802.11n(HT20)	17.40	17.57	17.54	17.702	17.719	17.691
	802.11n(HT40)	36.27	/	36.32	36.256	/	36.271
	802.11ac(HT20)	17.47	17.54	17.53	17.691	17.702	17.664
	802.11ac(HT40)	36.38	/	36.31	36.244	/	36.245
	802.11ac(HT80)	/	74.94	/	/	75.281	/

Test result plots shown as follows:

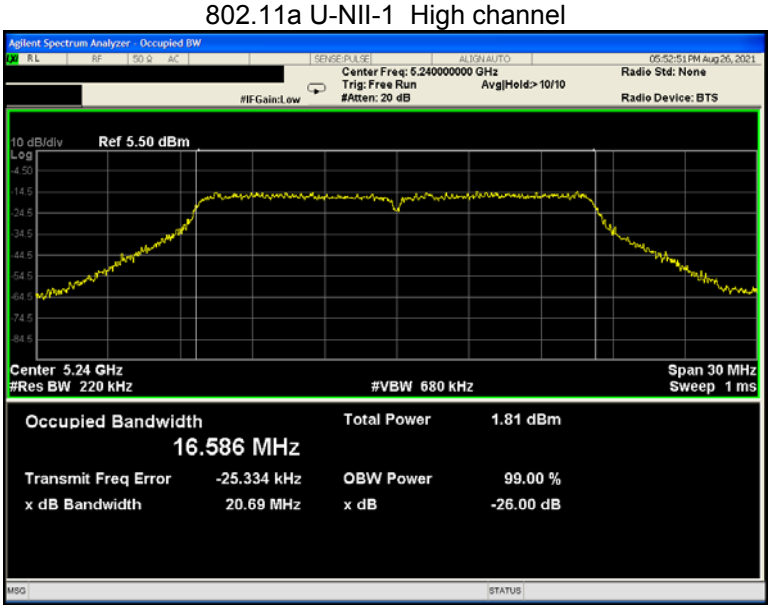
802.11a U-NII-1 Low channel



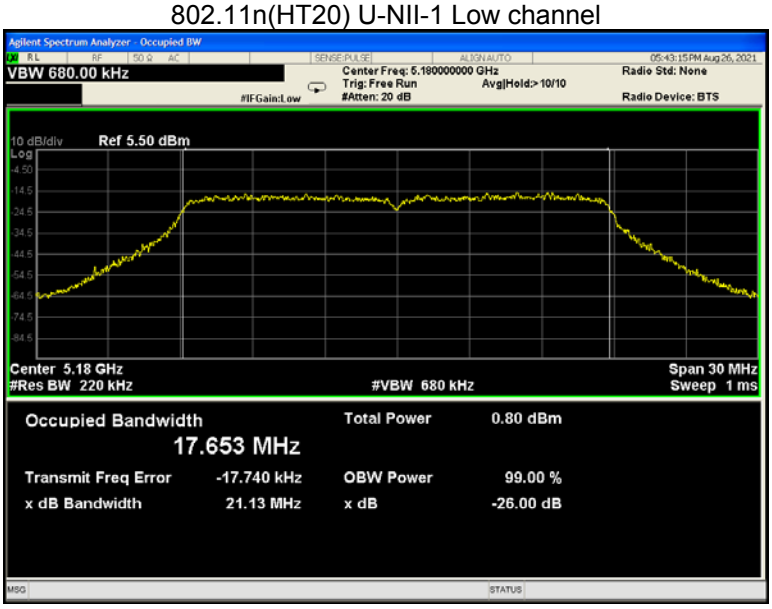
802.11a U-NII-1 Middle channel



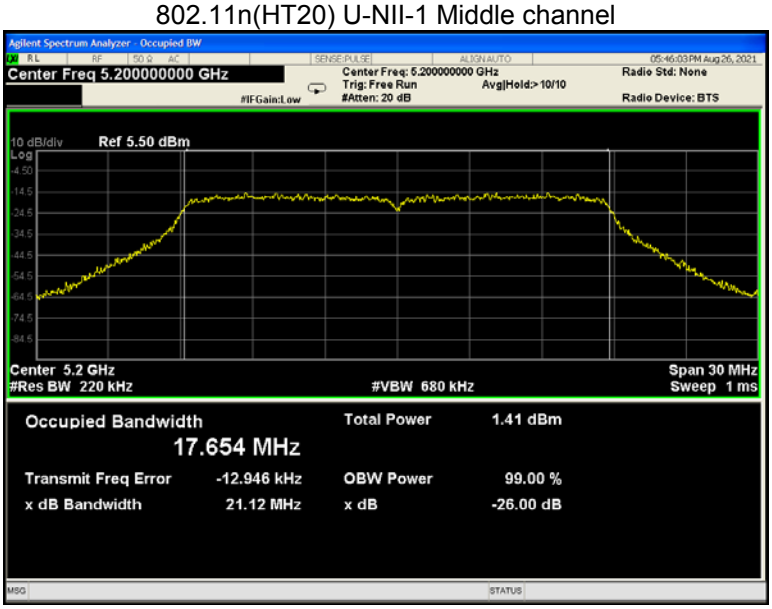
802.11a U-NII-1 High channel



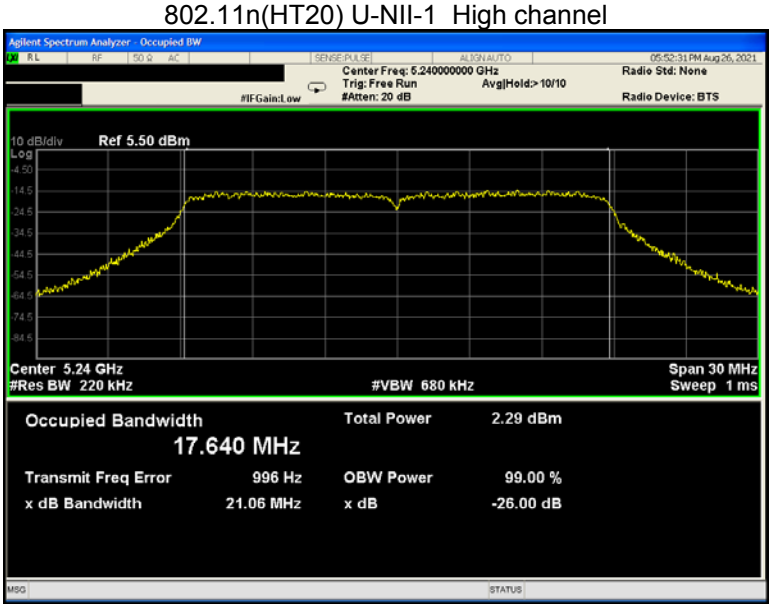
802.11n(HT20) U-NII-1 Low channel



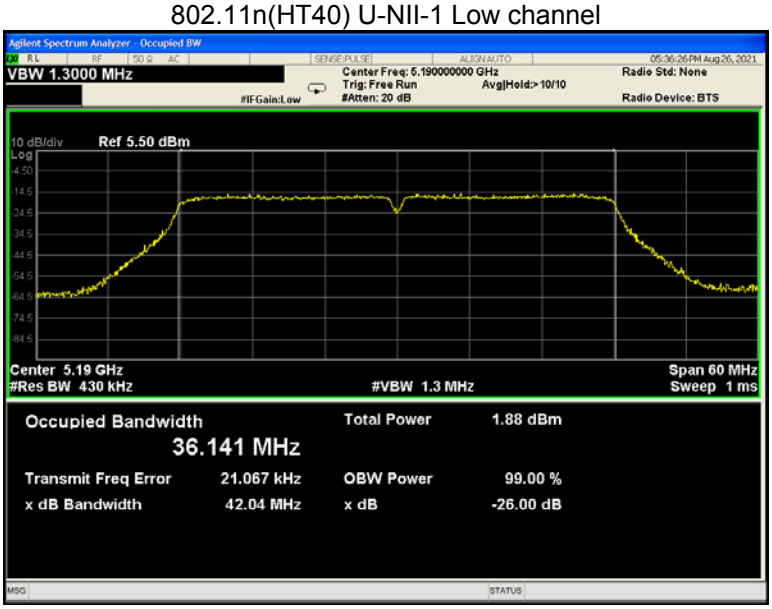
802.11n(HT20) U-NII-1 Middle channel



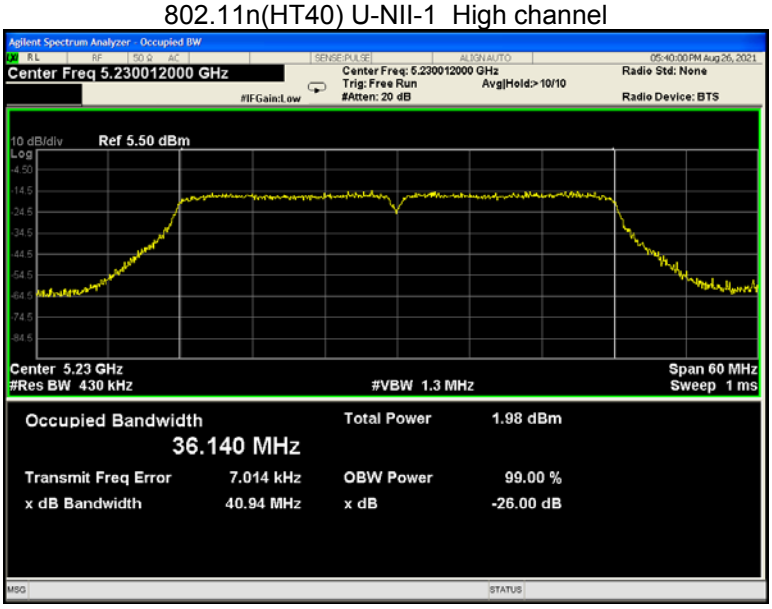
802.11n(HT20) U-NII-1 High channel



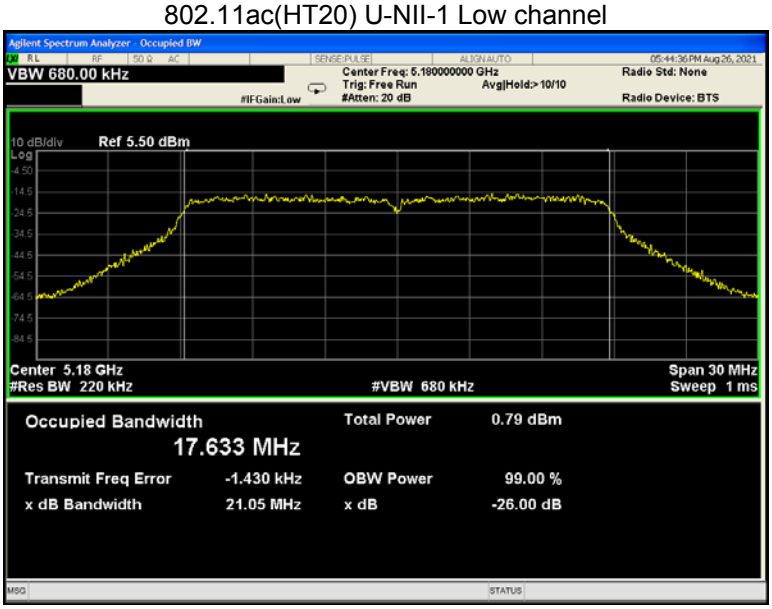
802.11n(HT40) U-NII-1 Low channel



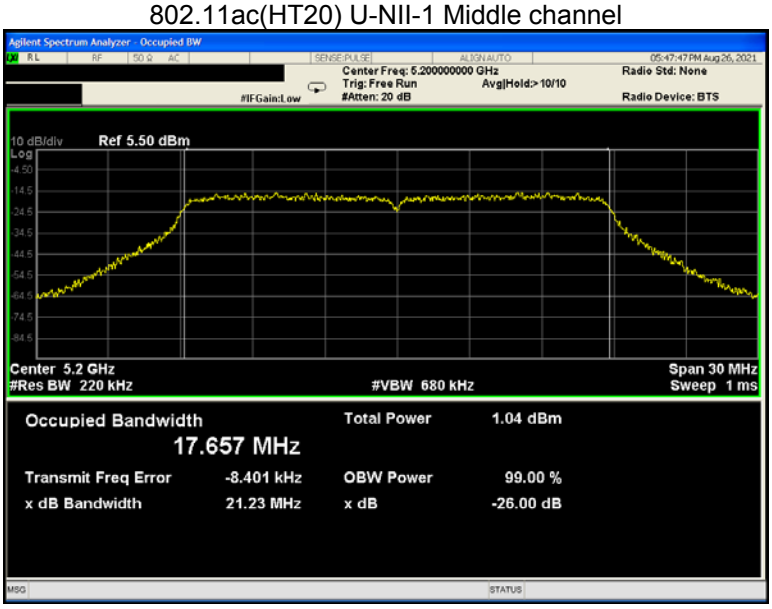
802.11n(HT40) U-NII-1 High channel



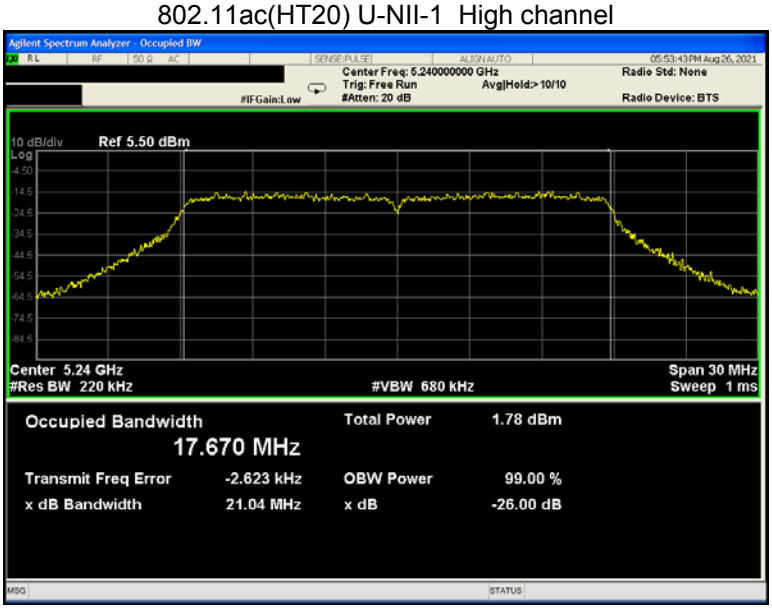
802.11ac(HT20) U-NII-1 Low channel



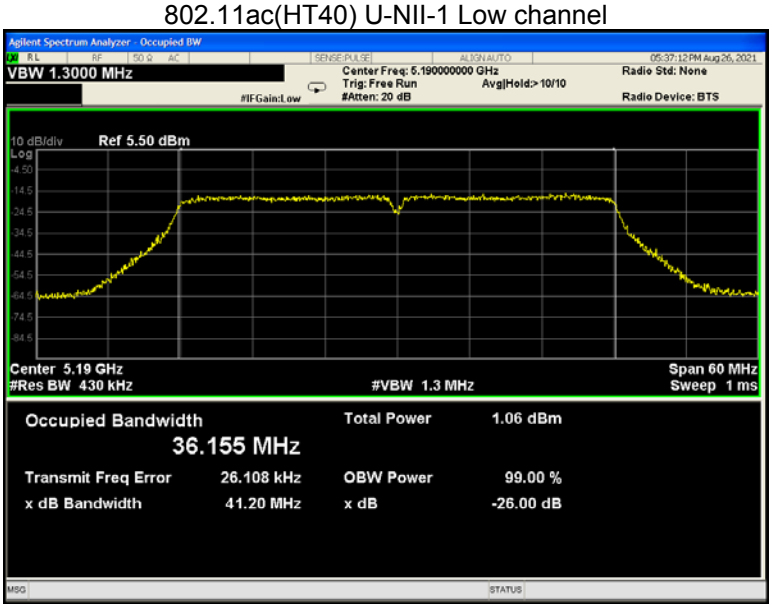
802.11ac(HT20) U-NII-1 Middle channel



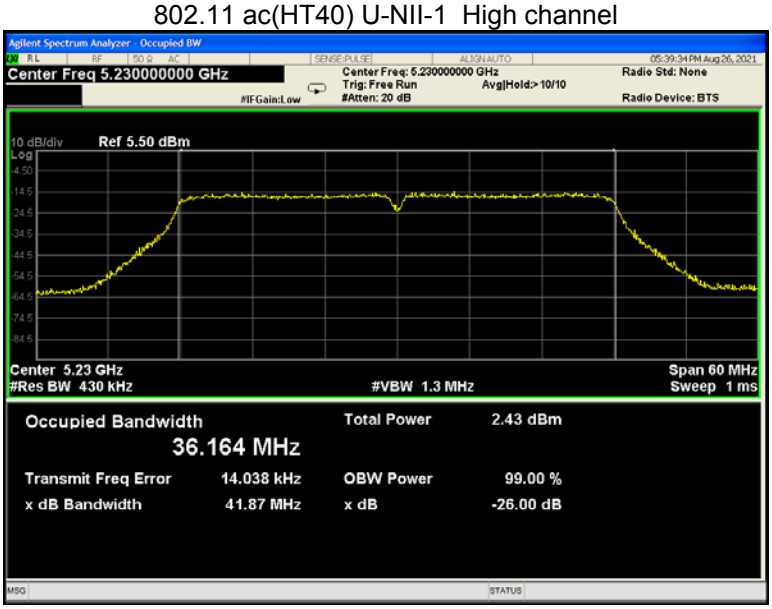
802.11ac(HT20) U-NII-1 High channel



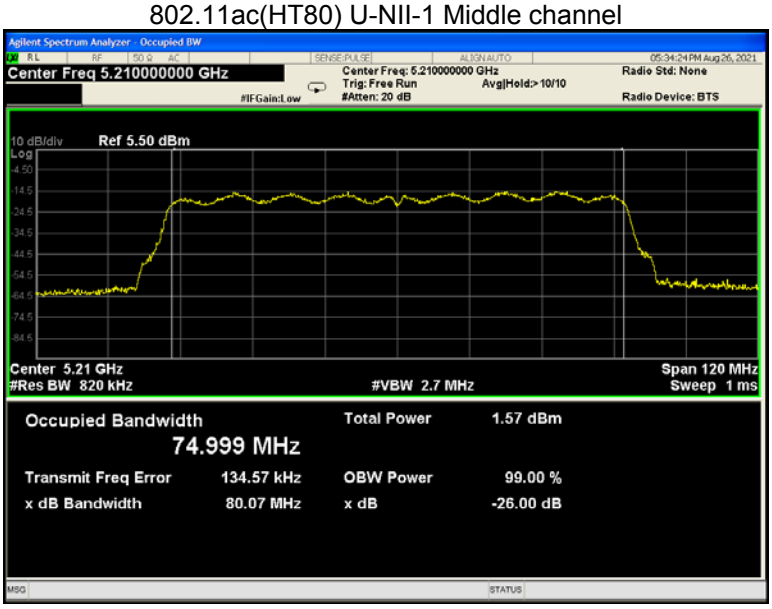
802.11ac(HT40) U-NII-1 Low channel



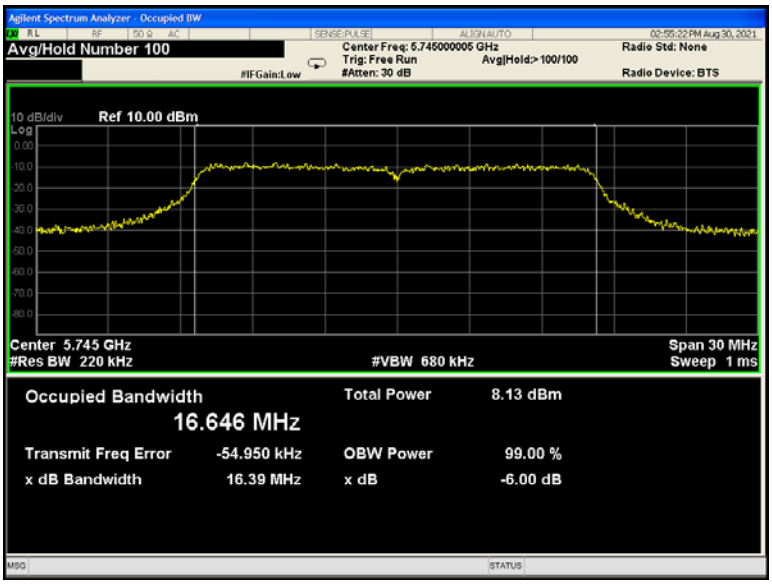
802.11 ac(HT40) U-NII-1 High channel



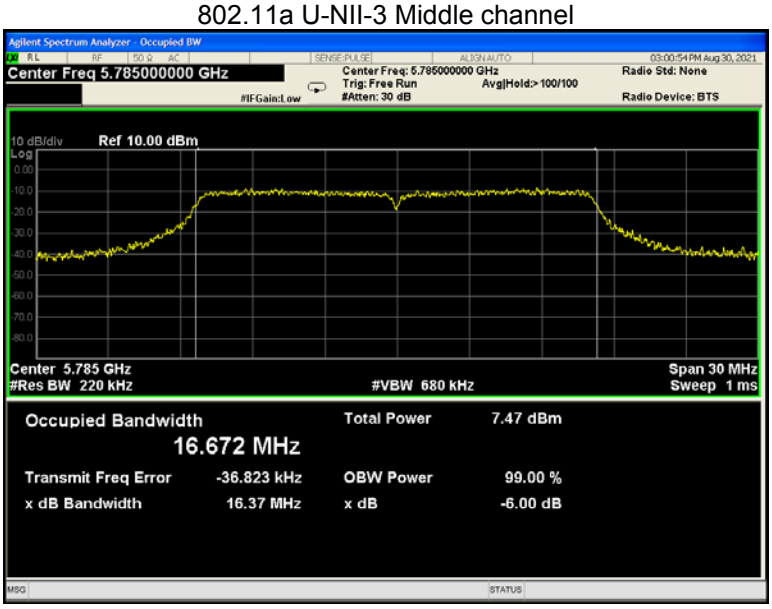
802.11ac(HT80) U-NII-1 Middle channel



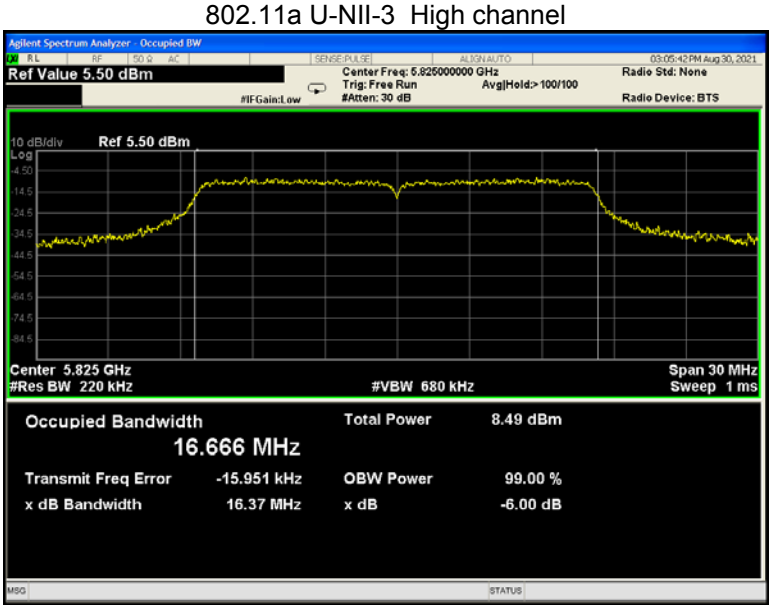
802.11a U-NII-3 Low channel



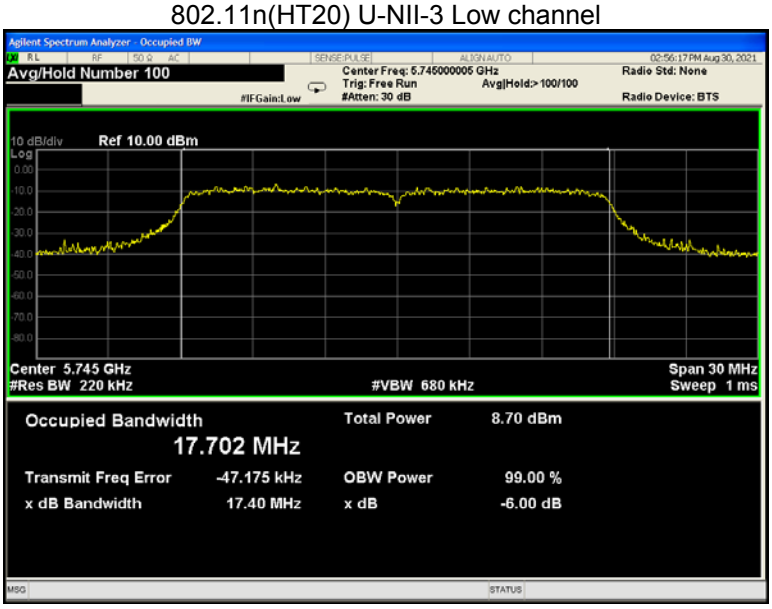
802.11a U-NII-3 Middle channel



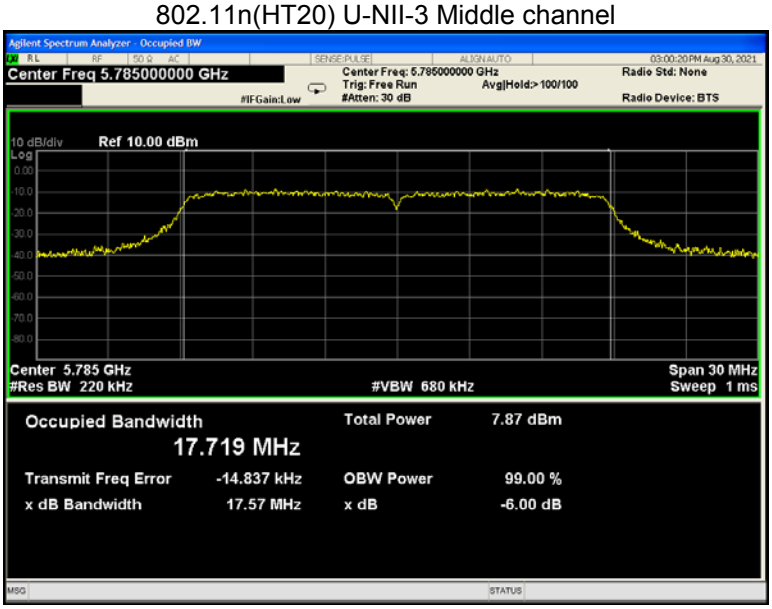
802.11a U-NII-3 High channel



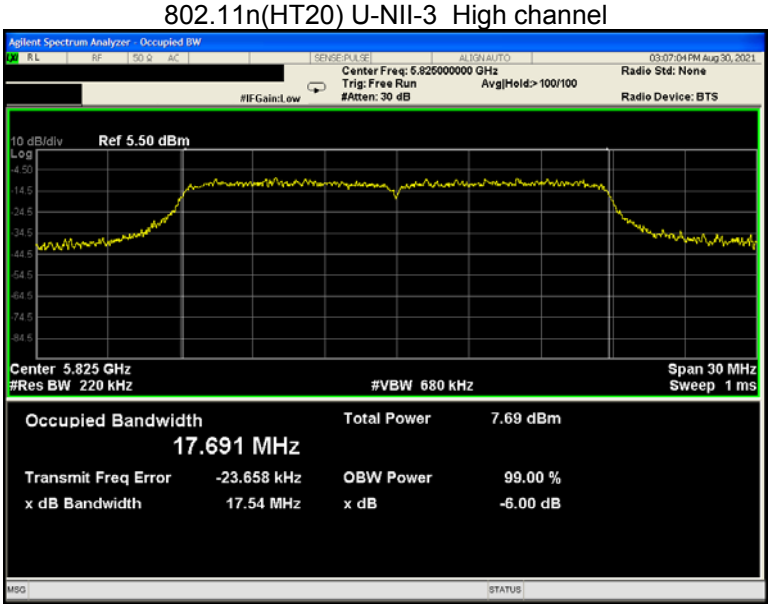
802.11n(HT20) U-NII-3 Low channel



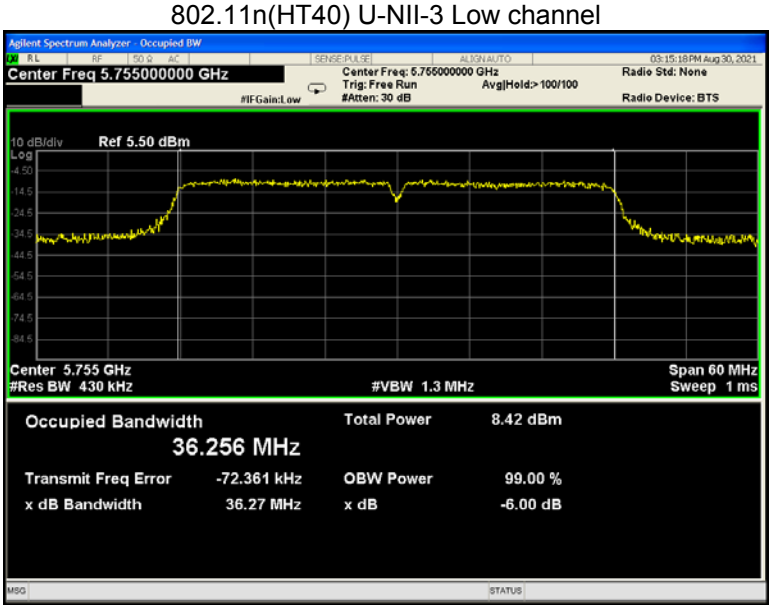
802.11n(HT20) U-NII-3 Middle channel



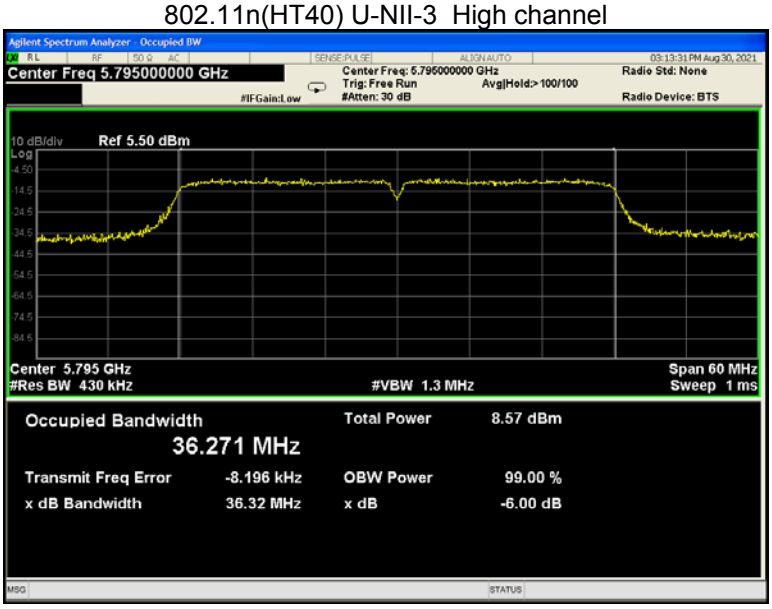
802.11n(HT20) U-NII-3 High channel



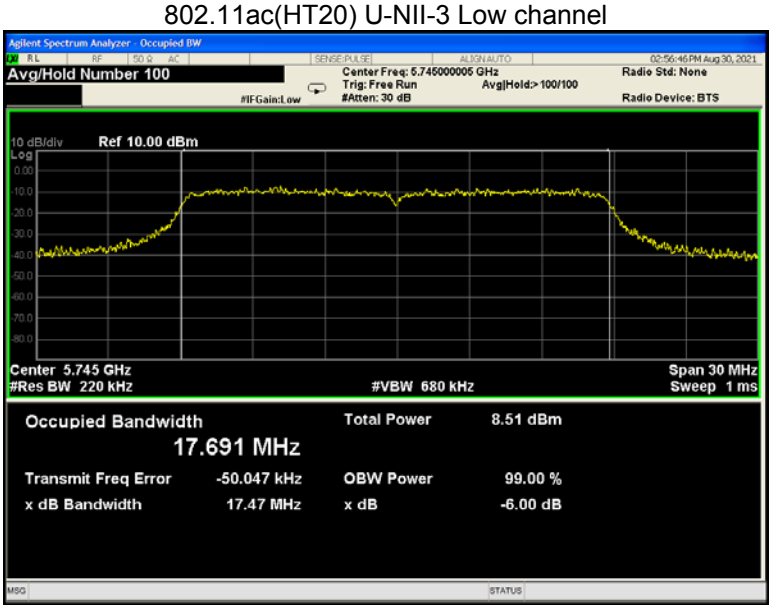
802.11n(HT40) U-NII-3 Low channel



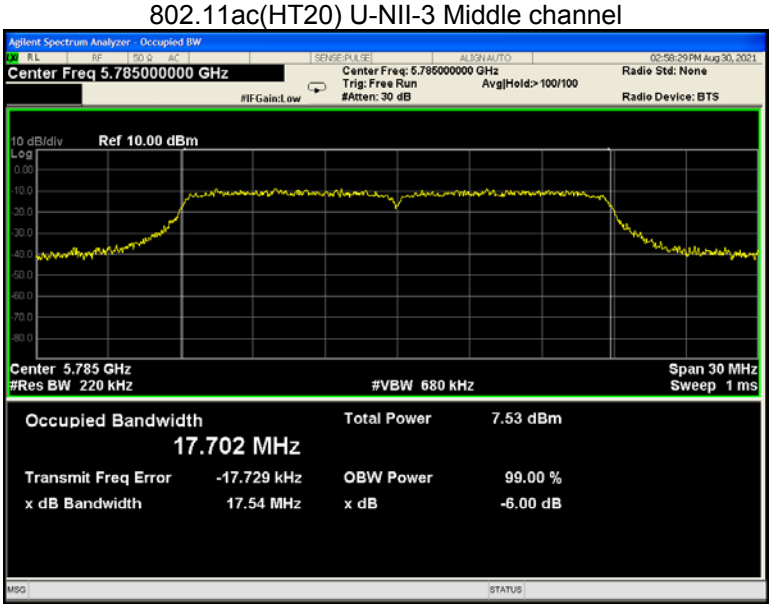
802.11n(HT40) U-NII-3 High channel



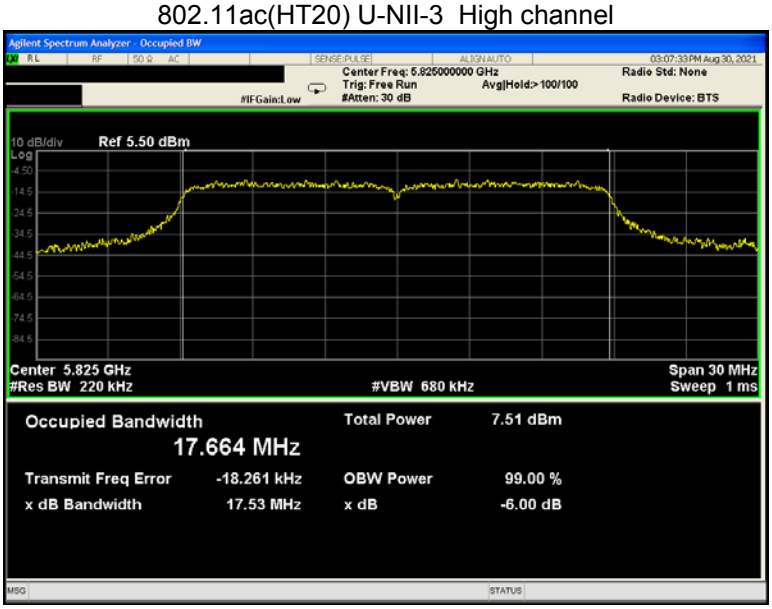
802.11ac(HT20) U-NII-3 Low channel



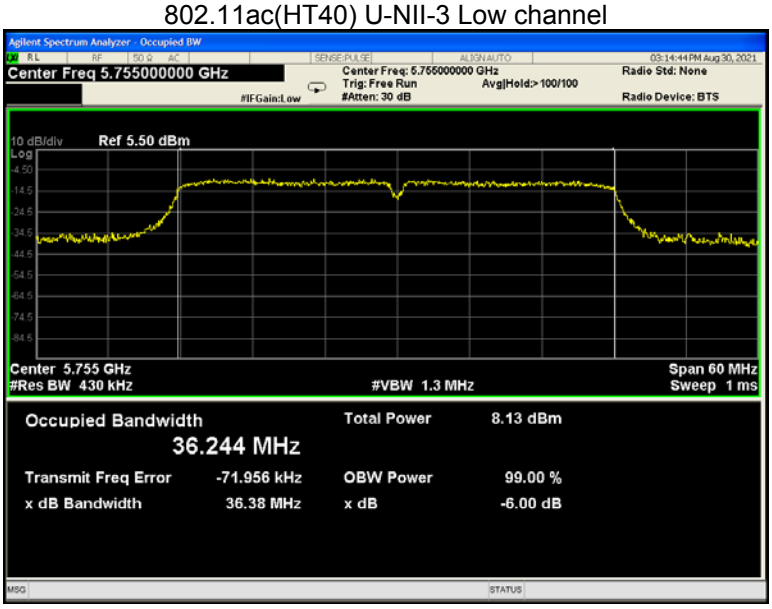
802.11ac(HT20) U-NII-3 Middle channel



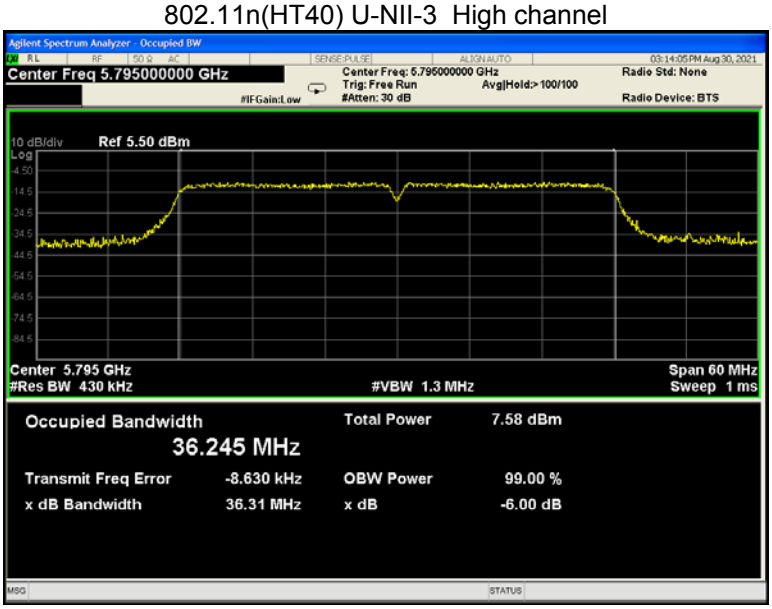
802.11ac(HT20) U-NII-3 High channel



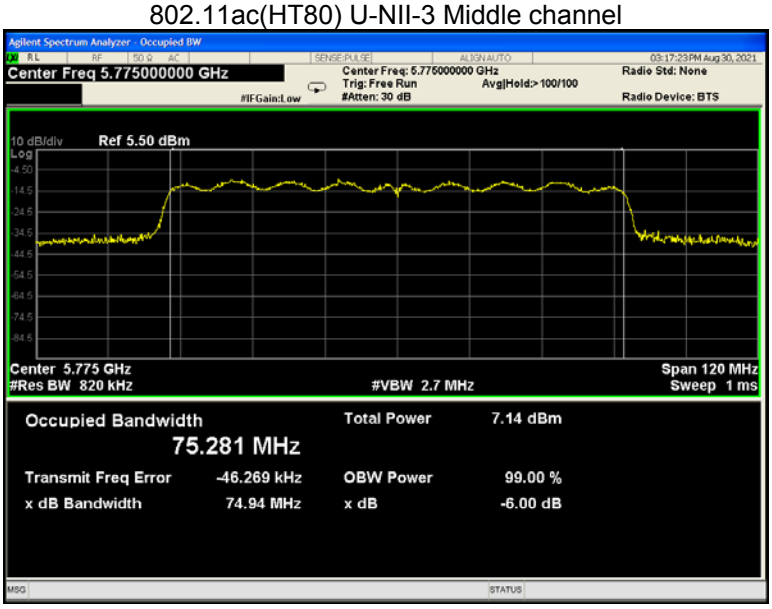
802.11ac(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Middle channel



13 Conducted Output Power

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a)
Test Method:	KDB662911 D01 Multiple Transmitter Output v02r01 KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section E
Test Limit:	U-NII-1 250mW(24dBm) U-NII-3 1W(30dBm)
Test Result:	PASS
Remark:	Conducted output power= measurement power+10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power

13.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the DTS bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.