

TEST REPORT

Reference No. : WTF19S12088767W003 V1
FCC ID : V5PQ25LWT
Applicant : PAX Technology Limited
Address : Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour, Hong Kong
Manufacturer : PAX Computer Technology (Shenzhen) Co., Ltd.
Address : 4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.
Product Name : POS Terminal
Model No. : Q25
Brand : PAX
Standards : FCC CFR 47 Part 15 C Section 15.407: 2018
Date of Receipt sample : 2019-12-20
Date of Test : 2019-12-21 to 2020-01-06
Date of Issue : 2020-01-19
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.

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3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF19S12088 767W003	2019-12-20	2019-12-21 to 2020-01-06	2020-01-07	original	-	Replaced
WTF19S12088 767W003 V1	2019-12-20	2019-12-21 to 2020-01-06	2020-01-19	Version 1	Updated	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	POS Terminal
Model(s):	Q25
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)
NFC:	Support
Hardware Version:	Q25-0UA-R75-0xLx
Software Version:	15.00.xx xxxx
Highest frequency (Exclude Radio):	1.25GHz
Storage Location:	Internal Storage
Note:	N/A

4.2 Details of E.U.T.

Operation Frequency:	802.11a/n/ac (HT20): U-NII-1: 5150-5250MHz, U-NII-2A: 5250-5350MHz(DFS), U-NII-2C: 5470-5725MHz(DFS), U-NII-3: 5725-5850MHz 802.11n/ac (HT40): U-NII-1: 5190-5230MHz, U-NII-2A: 5270-5310MHz(DFS), U-NII-2C: 5510-5670MHz(DFS), U-NII-3: 5755-5795MHz 802.11ac (HT80): U-NII-1: 5210MHz, U-NII-2A: 5290MHz(DFS), U-NII-2C: 5530-5610MHz(DFS), U-NII-3: 5775MHz
Max. RF output power:	U-NII-1: 17.87dBm U-NII-2A: 18.35dBm U-NII-2C: 18.07dBm U-NII-3: 18.35dBm
Type of Modulation:	OFDM
Antenna installation:	internal permanent antenna
Antenna Gain:	0.6dBi
Ratings:	DC 5V, 1.0A, charging from adapter (Adapter Input: 100-240V~50/60Hz 0.4A)
Adapter:	Manufacturer: Shenzhen Sorghum red Electronics Technology Co., Ltd. Model No.: A18A-050100U-US2

4.3 Channel List

U-NII-1 (5.15-5.25GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	38	5190
40	5200	42	5210
44	5220	46	5230
48	5240		

U-NII-2A (5.25-5.35GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	54	5270
56	5280	58	5290
60	5300	62	5310
64	5320		

U-NII-2C (5.47-5.725GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	102	5510
104	5520	106	5530
108	5540	110	5550
112	5560	116	5580
118	5590	120	5600
122	5610	124	5620
126	5630	128	5640
132	5660	134	5670
136	5680	140	5700

U-NII-3 (5.725-5.85GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	151	5755
153	5765	155	5775
157	5785	159	5795
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/ac(HT20):

channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	40	5200
48	5240		

channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	56	5280
64	5320		

channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	120	5600
140	5700		

channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	157	5785
165	5825		

For 802.11n/ac(HT40):

channel	Frequency(MHz)	channel	Frequency(MHz)
38	5190	46	5230

channel	Frequency(MHz)	channel	Frequency(MHz)
54	5270	62	5310

channel	Frequency(MHz)	channel	Frequency(MHz)
102	5510	110	5550
134	5670		

channel	Frequency(MHz)	channel	Frequency(MHz)
151	5755	159	5795

For 802.11ac(HT80):

channel	Frequency(MHz)	channel	Frequency(MHz)
42	5210		

channel	Frequency(MHz)	channel	Frequency(MHz)
58	5290		

channel	Frequency(MHz)	channel	Frequency(MHz)
106	5530	122	5610

channel	Frequency(MHz)	channel	Frequency(MHz)
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 TermAssist and SecureCRT tool Use together.

Test Items	Mode	Data Rate	TX/RX
Radiated Emissions	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Duty Cycle	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Band Edge	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
6dB Bandwidth	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
26dB Bandwidth and 99% Occupied Bandwidth	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Conducted Output Power	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Power Spectral Density	802.11a (HT20)	6 Mbps	TX
	802.11n/ac(HT20/40/80)	MCS0	TX
Frequency Stability	Un-modulation	/	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 Services(Shenzhen) 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 Services(Shenzhen) 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	2019-09-14	2020-09-13
2.	LISN	R&S	ENV216	101215	2019-09-14	2020-09-13
3.	Cable	Top	TYPE16(3.5M)	-	2019-09-14	2020-09-13
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	2019-09-14	2020-09-13
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	2019-09-14	2020-09-13
3.	Limiter	York	MTS-IMP-136	261115-001-0024	2019-09-14	2020-09-13
4.	Cable	LARGE	RF300	-	2019-09-14	2020-09-13
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	2019-09-14	2020-09-13
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	2019-09-14	2020-09-13
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2019-09-14	2020-09-13
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2019-09-14	2020-09-13
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2019-09-14	2020-09-13
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2019-09-14	2020-09-13
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2019-09-14	2020-09-13
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	2019-09-14	2020-09-13
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	2019-09-14	2020-09-13
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2019-09-14	2020-09-13
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	2019-09-14	2020-09-13
4	Cable	HUBER+SUHNER	CBL2	525178	2019-09-14	2020-09-13
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	2019-09-14	2020-09-13
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2019-09-14	2020-09-13
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	2019-09-14	2020-09-13

5.2 Description of Support Units

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

5.3 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
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	PASS
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:	66-56 dB μ V between 0.15MHz & 0.5MHz 56 dB μ V between 0.5MHz & 5MHz 60 dB μ V between 5MHz & 30MHz
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)

7.1 E.U.T. Operation

Operating Environment :

Temperature: 21.5 °C

Humidity: 51.9 % RH

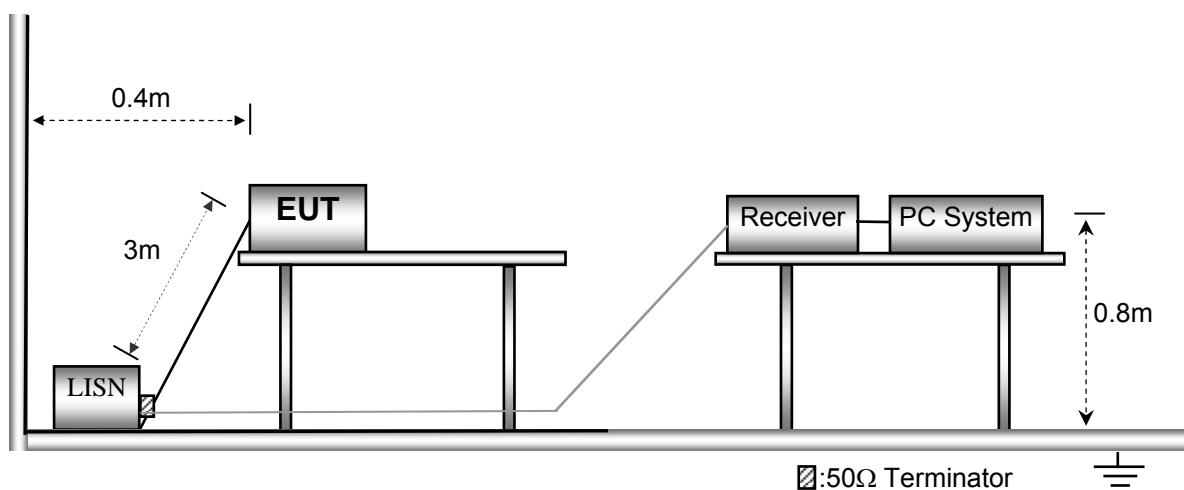
Atmospheric Pressure: 101.2kPa

EUT Operation :

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

7.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.



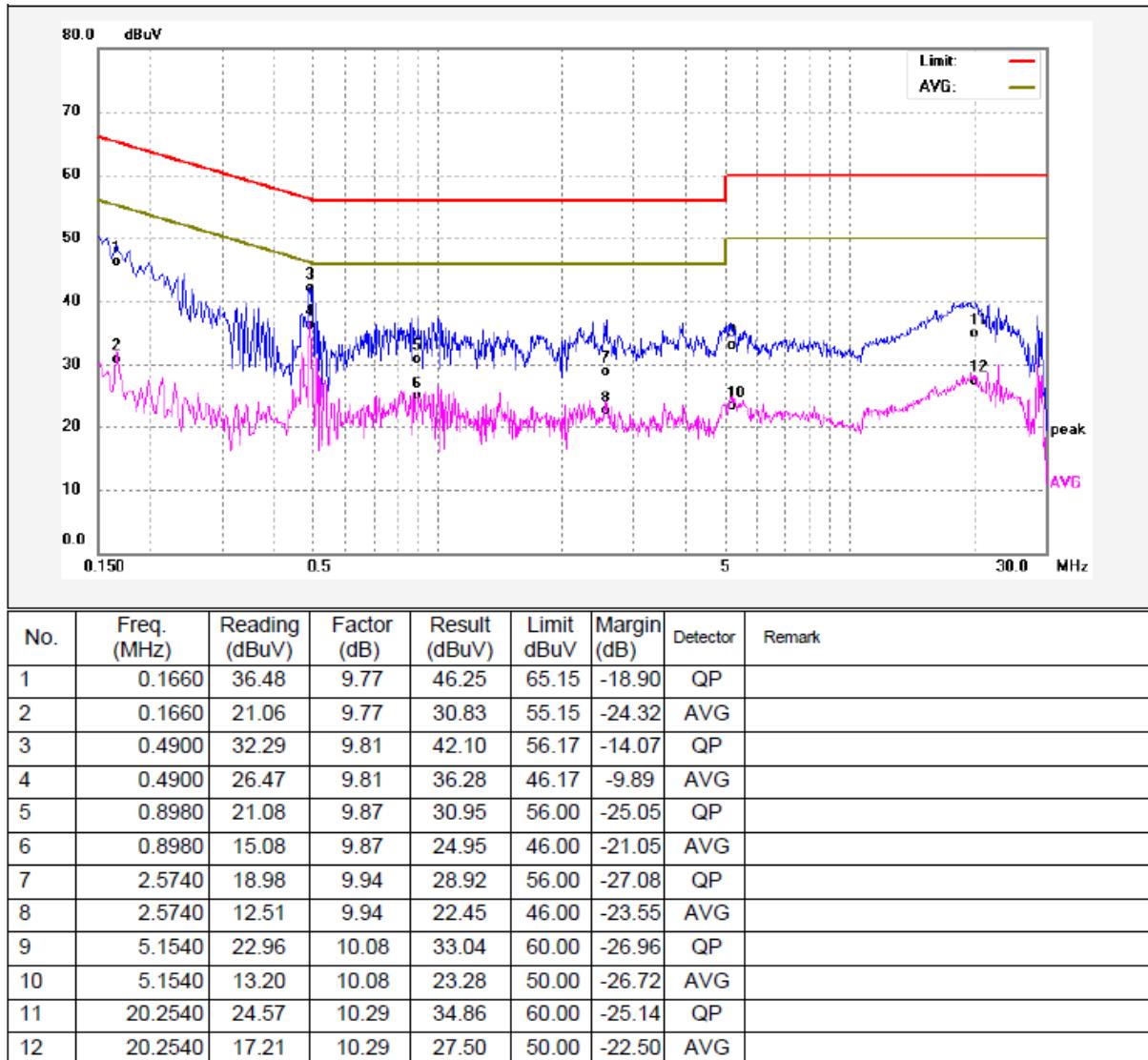
7.3 Measurement Description

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.

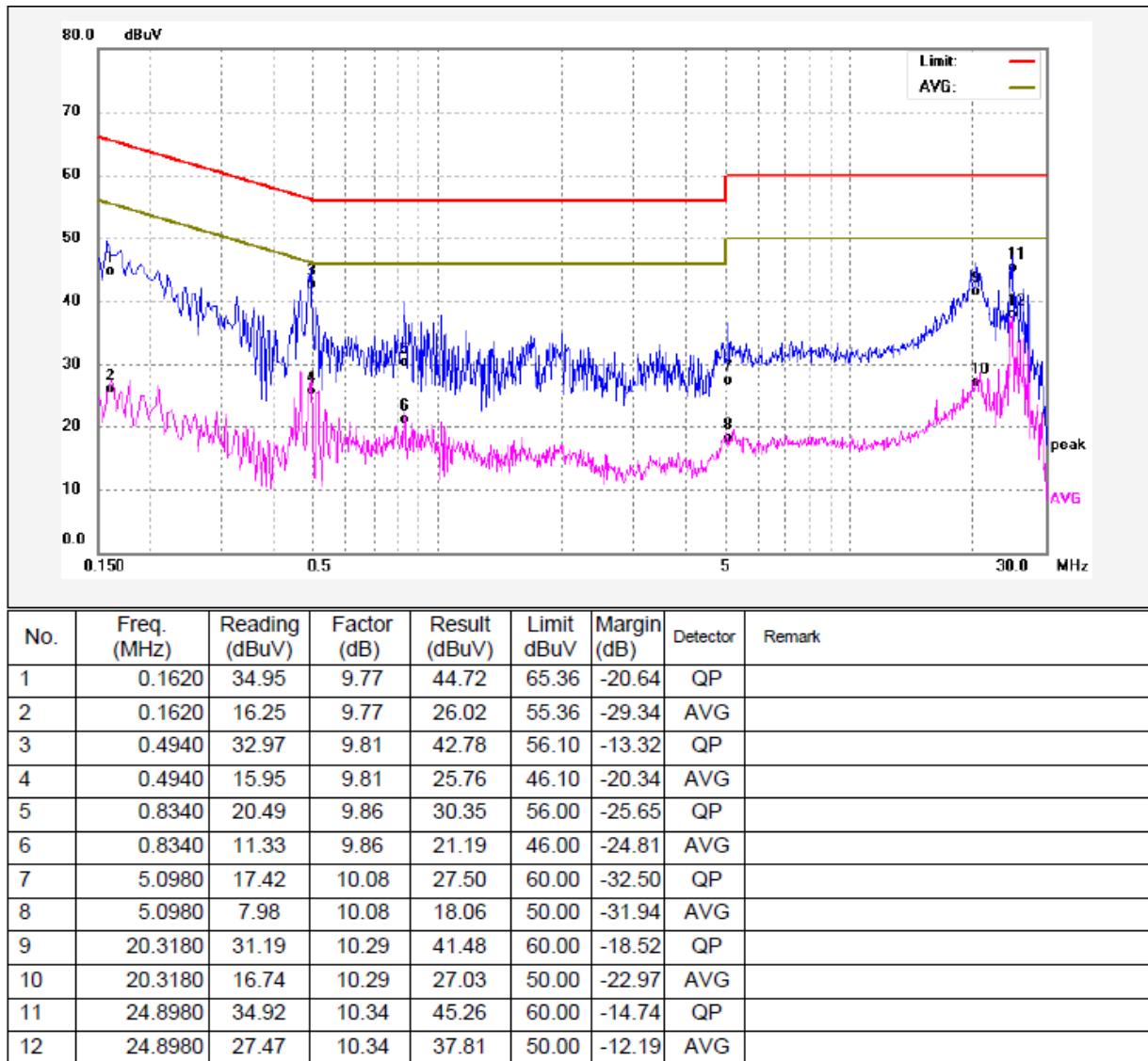
7.4 Conducted Emission Test Result

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

Live line:



Neutral line:



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)	20log ^{(2400/F(kHz))} + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40
1.705 ~ 30	30	30	100 * 30	20log ⁽³⁰⁾ + 40
30 ~ 88	100	3	100	20log ⁽¹⁰⁰⁾
88 ~ 216	150	3	150	20log ⁽¹⁵⁰⁾
216 ~ 960	200	3	200	20log ⁽²⁰⁰⁾
Above 960	500	3	500	20log ⁽⁵⁰⁰⁾

8.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C

Humidity: 52.1 % RH

Atmospheric Pressure: 101.2kPa

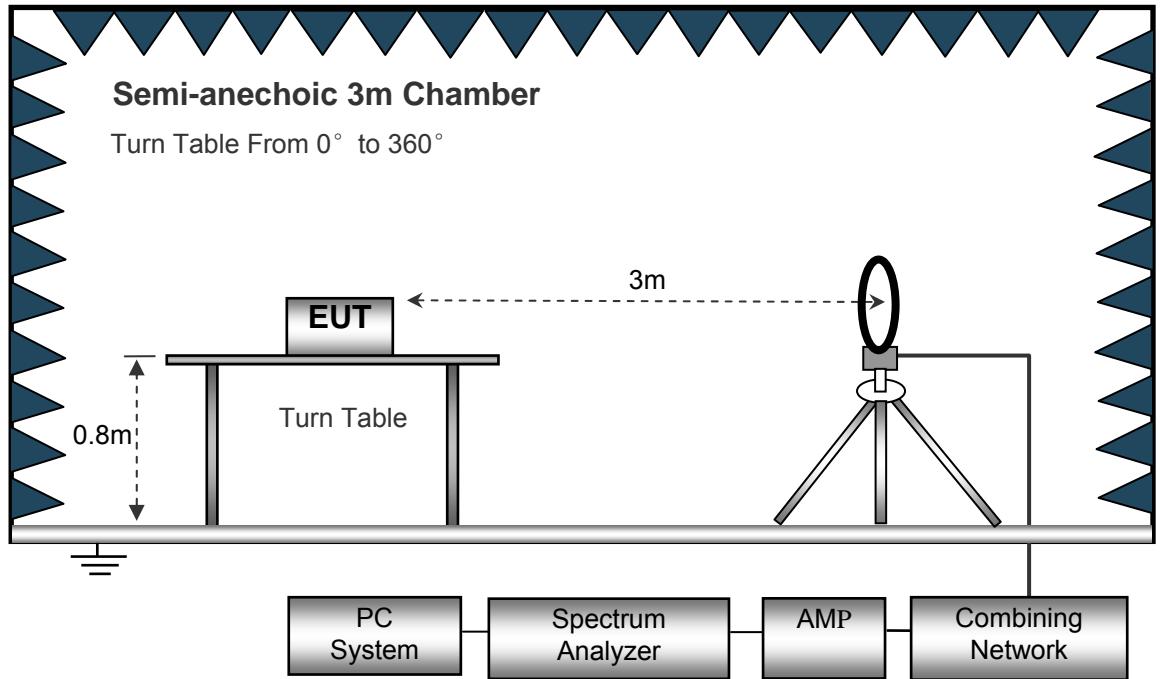
EUT Operation :

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

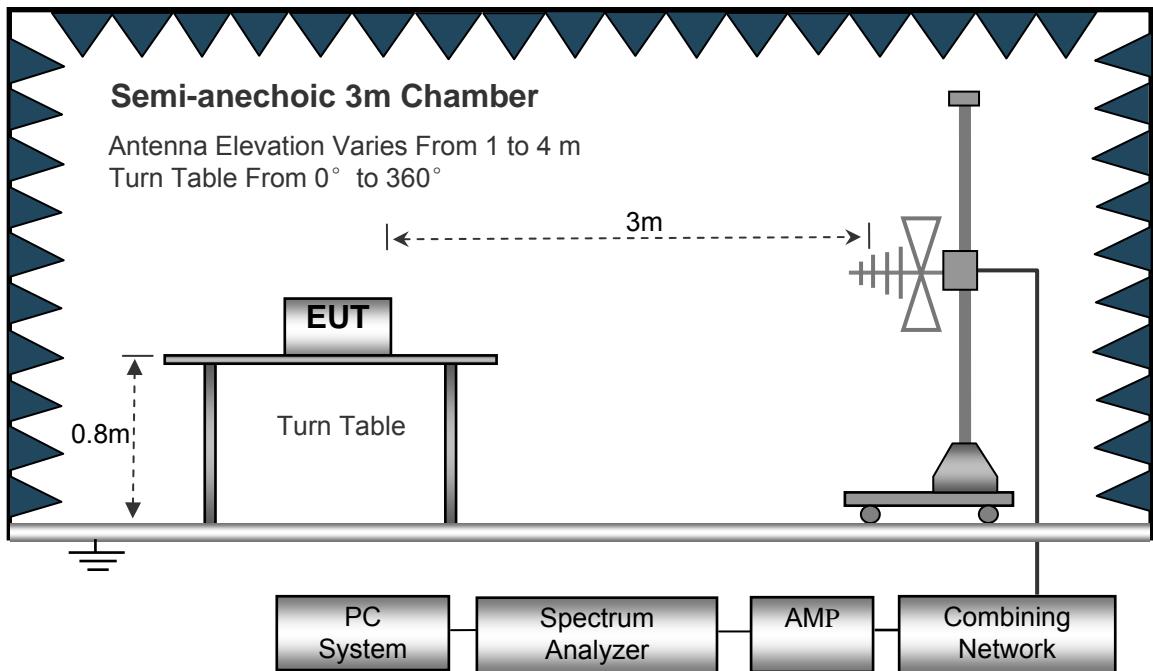
8.2 Test Setup

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

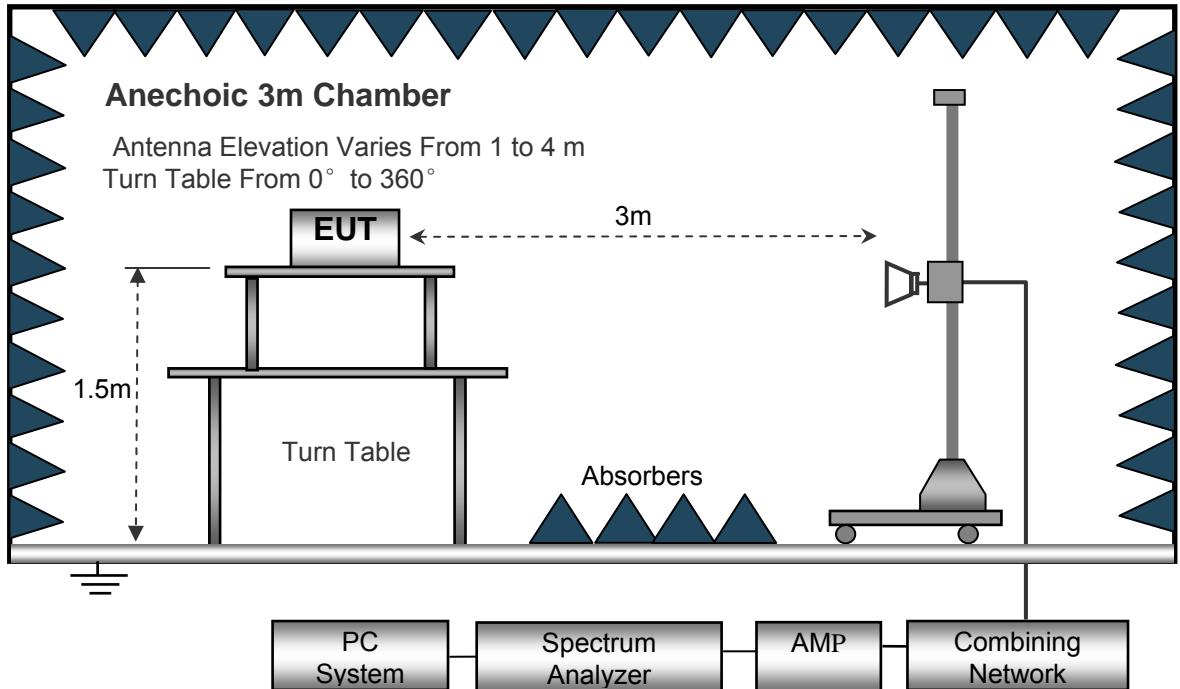
The test setup for emission measurement below 30MHz.



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 during 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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

8.6 Summary of Test Results

Test Frequency: 9KHz~30MHz

Frequency (MHz)	Measurement results dB μ V @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dB μ V/m @30m	Limits dB μ V/m @30m	Margin dB
6.021	25.22	QP	21.84	40.00	7.06	29.54	-22.48
15.730	24.16	QP	21.35	40.00	5.51	29.54	-24.03
25.680	25.89	QP	20.67	40.00	6.56	29.54	-22.98
U-NII-1:802.11n20 5180MHz							
6.021	25.30	QP	21.84	40.00	7.14	29.54	-22.40
15.730	25.12	QP	21.35	40.00	6.47	29.54	-23.07
25.680	25.34	QP	20.67	40.00	6.01	29.54	-23.53
U-NII-1:802.11ac 20 5180MHz							
6.021	25.30	QP	21.84	40.00	7.14	29.54	-22.40
15.730	24.63	QP	21.35	40.00	5.98	29.54	-23.56
25.680	25.77	QP	20.67	40.00	6.44	29.54	-23.10
U-NII-1:802.11n40 5190MHz							
6.021	25.63	QP	21.84	40.00	7.47	29.54	-22.07
15.730	24.87	QP	21.35	40.00	6.22	29.54	-23.32
25.680	24.96	QP	20.67	40.00	5.63	29.54	-23.91
U-NII-1:802.11ac40 5190MHz							
6.021	25.19	QP	21.84	40.00	7.03	29.54	-22.51
15.730	24.56	QP	21.35	40.00	5.91	29.54	-23.63
25.680	25.81	QP	20.67	40.00	6.48	29.54	-23.06
U-NII-1:802.11ac80 5210MHz							
6.021	25.16	QP	21.84	40.00	7.00	29.54	-22.54
15.730	24.57	QP	21.35	40.00	5.92	29.54	-23.62
25.680	25.10	QP	20.67	40.00	5.77	29.54	-23.77

Frequency (MHz)	Measurement results dB μ V @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dB μ V/m @30m	Limits dB μ V/m @30m	Margin dB
U-NII-2A:802.11a 5260MHz							
6.021	25.98	QP	21.84	40.00	7.82	29.54	-21.72
15.730	24.33	QP	21.35	40.00	5.68	29.54	-23.86
25.680	24.75	QP	20.67	40.00	5.42	29.54	-24.12
U-NII-2A:802.11n20 5260MHz							
6.021	25.02	QP	21.84	40.00	6.86	29.54	-22.68
15.730	24.63	QP	21.35	40.00	5.98	29.54	-23.56
25.680	24.19	QP	20.67	40.00	4.86	29.54	-24.68
U-NII-2A:802.11ac 5260MHz							
6.021	25.38	QP	21.84	40.00	7.22	29.54	-22.32
15.730	24.71	QP	21.35	40.00	6.06	29.54	-23.48
25.680	24.56	QP	20.67	40.00	5.23	29.54	-24.31
U-NII-2A:802.11n40 5270MHz							
6.021	25.08	QP	21.84	40.00	6.92	29.54	-22.62
15.730	24.55	QP	21.35	40.00	5.90	29.54	-23.64
25.680	25.70	QP	20.67	40.00	6.37	29.54	-23.17
U-NII-2A:802.11ac40 5270MHz							
6.021	25.10	QP	21.84	40.00	6.94	29.54	-22.60
15.730	24.88	QP	21.35	40.00	6.23	29.54	-23.31
25.680	24.25	QP	20.67	40.00	4.92	29.54	-24.62
U-NII-2A:802.11ac80 5290MHz							
6.021	24.59	QP	21.84	40.00	6.43	29.54	-23.11
15.730	25.13	QP	21.35	40.00	6.48	29.54	-23.06
25.680	24.87	QP	20.67	40.00	5.54	29.54	-24.00

Frequency (MHz)	Measurement results dB μ V @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dB μ V/m @30m	Limits dB μ V/m @30m	Margin dB
U-NII-2C:802.11a 5500MHz							
6.021	25.18	QP	21.84	40.00	7.02	29.54	-22.52
15.730	24.50	QP	21.35	40.00	5.85	29.54	-23.69
25.680	24.98	QP	20.67	40.00	5.65	29.54	-23.89
U-NII-2C:802.11n20 5500MHz							
6.021	25.11	QP	21.84	40.00	6.95	29.54	-22.59
15.730	24.87	QP	21.35	40.00	6.22	29.54	-23.32
25.680	25.31	QP	20.67	40.00	5.98	29.54	-23.56
U-NII-2C:802.11ac20 5500MHz							
6.021	25.66	QP	21.84	40.00	7.50	29.54	-22.04
15.730	24.83	QP	21.35	40.00	6.18	29.54	-23.36
25.680	25.34	QP	20.67	40.00	6.01	29.54	-23.53
U-NII-2C:802.11n40 5510MHz							
6.021	25.44	QP	21.84	40.00	7.28	29.54	-22.26
15.730	25.68	QP	21.35	40.00	7.03	29.54	-22.51
25.680	25.12	QP	20.67	40.00	5.79	29.54	-23.75
U-NII-2C:802.11ac40 5510MHz							
6.021	25.63	QP	21.84	40.00	7.47	29.54	-22.07
15.730	24.58	QP	21.35	40.00	5.93	29.54	-23.61
25.680	25.33	QP	20.67	40.00	6.00	29.54	-23.54
U-NII-2C:802.11ac80 5530MHz							
6.021	24.58	QP	21.84	40.00	6.42	29.54	-23.12
15.730	25.17	QP	21.35	40.00	6.52	29.54	-23.02
25.680	24.56	QP	20.67	40.00	5.23	29.54	-24.31

Frequency (MHz)	Measurement results dB μ V @3m	Detector PK/QP	Correct factor dB/m	Extrapolation factor dB	Measurement results (calculated) dB μ V/m @30m	Limits dB μ V/m @30m	Margin dB
U-NII-3 802.11a 5745MHz							
6.021	25.11	QP	21.84	40.00	6.95	29.54	-22.59
15.730	24.63	QP	21.35	40.00	5.98	29.54	-23.56
25.680	25.90	QP	20.67	40.00	6.57	29.54	-22.97
U-NII-3 802.11n20 5745MHz							
6.021	24.58	QP	21.84	40.00	6.42	29.54	-23.12
15.730	25.43	QP	21.35	40.00	6.78	29.54	-22.76
25.680	24.25	QP	20.67	40.00	4.92	29.54	-24.62
U-NII-3 802.11ac 5745MHz							
6.021	25.67	QP	21.84	40.00	7.51	29.54	-22.03
15.730	24.52	QP	21.35	40.00	5.87	29.54	-23.67
25.680	25.06	QP	20.67	40.00	5.73	29.54	-23.81
U-NII-3 802.11n40 5755MHz							
6.021	24.50	QP	21.84	40.00	6.34	29.54	-23.20
15.730	24.64	QP	21.35	40.00	5.99	29.54	-23.55
25.680	24.36	QP	20.67	40.00	5.03	29.54	-24.51
U-NII-3 802.11ac40 5755MHz							
6.021	25.09	QP	21.84	40.00	6.93	29.54	-22.61
15.730	24.71	QP	21.35	40.00	6.06	29.54	-23.48
25.680	25.33	QP	20.67	40.00	6.00	29.54	-23.54
U-NII-3 802.11ac80 5775MHz							
6.021	25.06	QP	21.84	40.00	6.90	29.54	-22.64
15.730	24.09	QP	21.35	40.00	5.44	29.54	-24.10
25.680	25.18	QP	20.67	40.00	5.85	29.54	-23.69

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)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11a U-NII-1 Low Channel 5180MHz									
223.45	39.93	QP	167	1.8	H	-11.62	28.31	46.00	-17.69
223.45	37.56	QP	155	1.8	V	-11.62	25.94	46.00	-20.06
4511.94	51.02	PK	6	1.2	H	-2.03	48.99	74.00	-25.01
4511.94	45.76	Ave	6	1.2	H	-2.03	43.73	54.00	-10.27
5148.65	53.26	PK	116	1.6	H	-1.02	52.24	74.00	-21.76
5148.65	47.58	Ave	116	1.6	H	-1.02	46.56	54.00	-7.44
10360.00	41.67	PK	194	1.5	H	5.33	47.00	74.00	-27.00
10360.00	38.16	Ave	194	1.5	H	5.33	43.49	54.00	-10.51
802.11a U-NII-1 Middle channel 5200MHz									
223.45	40.36	QP	143	1.2	H	-11.62	28.74	46.00	-17.26
223.45	38.67	QP	17	1.9	V	-11.62	27.05	46.00	-18.95
4502.78	52.02	PK	188	1.4	H	-1.94	50.08	74.00	-23.92
4502.78	44.27	Ave	188	1.4	H	-1.94	42.33	54.00	-11.67
5135.42	53.01	PK	31	1.1	H	-1.06	51.95	74.00	-22.05
5135.42	47.98	Ave	31	1.1	H	-1.06	46.92	54.00	-7.08
10400.00	42.38	PK	186	1.3	H	5.21	47.59	74.00	-26.41
10400.00	37.91	Ave	186	1.3	H	5.21	43.12	54.00	-10.88

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11a U-NII-1 High channel 5240MHz									
223.45	39.41	QP	345	1.8	H	-11.62	27.79	46.00	-18.21
223.45	37.99	QP	140	1.3	V	-11.62	26.37	46.00	-19.63
4537.16	52.25	PK	242	1.8	H	-2.24	50.01	74.00	-23.99
4537.16	44.80	Ave	242	1.8	H	-2.24	42.56	54.00	-11.44
5145.04	54.65	PK	211	1.5	H	-1.09	53.56	74.00	-20.44
5145.04	49.39	Ave	211	1.5	H	-1.09	48.30	54.00	-5.70
10480.00	41.19	PK	337	1.1	H	5.14	46.33	74.00	-27.67
10480.00	39.49	Ave	337	1.1	H	5.14	44.63	54.00	-9.37
802.11a U-NII-2A Low Channel 5260MHz									
223.45	41.05	QP	268	1.2	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	267	1.6	V	-11.62	24.64	46.00	-21.36
4523.52	50.44	PK	9	1.3	H	-2.03	48.41	74.00	-25.59
4523.52	46.32	Ave	9	1.3	H	-2.03	44.29	54.00	-9.71
5126.08	52.53	PK	208	1.2	H	-1.02	51.51	74.00	-22.49
5126.08	48.18	Ave	208	1.2	H	-1.02	47.16	54.00	-6.84
10520.00	41.08	PK	175	1.4	H	5.33	46.41	74.00	-27.59
10520.00	36.85	Ave	175	1.4	H	5.33	42.18	54.00	-11.82

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11a U-NII-2A middle channel 5280MHz									
223.45	40.93	QP	260	1.2	H	-11.62	29.31	46.00	-16.69
223.45	35.94	QP	153	1.3	V	-11.62	24.32	46.00	-21.68
4527.32	49.30	PK	209	1.4	H	-1.94	47.36	74.00	-26.64
4527.32	47.68	Ave	209	1.4	H	-1.94	45.74	54.00	-8.26
5140.95	51.56	PK	336	1.3	H	-1.06	50.50	74.00	-23.50
5140.95	48.00	Ave	336	1.3	H	-1.06	46.94	54.00	-7.06
10560.00	42.55	PK	33	1.3	H	5.21	47.76	74.00	-26.24
10560.00	37.30	Ave	33	1.3	H	5.21	42.51	54.00	-11.49
802.11a U-NII-2A High channel 5320MHz									
223.45	40.05	QP	26	1.5	H	-11.62	28.43	46.00	-17.57
223.45	37.58	QP	186	1.3	V	-11.62	25.96	46.00	-20.04
4511.96	51.61	PK	10	1.4	H	-2.24	49.37	74.00	-24.63
4511.96	46.41	Ave	10	1.4	H	-2.24	44.17	54.00	-9.83
5137.38	53.50	PK	221	1.4	H	-1.09	52.41	74.00	-21.59
5137.38	48.30	Ave	221	1.4	H	-1.09	47.21	54.00	-6.79
10640.00	41.45	PK	326	1.3	H	5.14	46.59	68.20	-21.61
10640.00	36.47	Ave	326	1.3	H	5.14	41.61	54.00	-12.39

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-2C Low Channel 5500MHz									
223.45	41.05	QP	54	1.6	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	50	1.1	V	-11.62	24.64	46.00	-21.36
4516.74	50.44	PK	336	1.1	H	-2.03	48.41	74.00	-25.59
4516.74	46.32	Ave	336	1.1	H	-2.03	44.29	54.00	-9.71
5113.52	52.53	PK	39	1.6	H	-1.02	51.51	74.00	-22.49
5113.52	48.18	Ave	39	1.6	H	-1.02	47.16	54.00	-6.84
11000.00	41.08	PK	122	1.5	H	5.33	46.41	68.20	-21.79
11000.00	36.85	Ave	122	1.5	H	5.33	42.18	54.00	-11.82
802.11a U-NII-2C Middle channel 5600MHz									
223.45	40.87	QP	282	1.8	H	-11.62	29.25	46.00	-16.75
223.45	36.47	QP	76	2.0	V	-11.62	24.85	46.00	-21.15
4515.84	49.29	PK	223	1.5	H	-1.94	47.35	74.00	-26.65
4515.84	44.93	Ave	223	1.5	H	-1.94	42.99	54.00	-11.01
5112.40	52.02	PK	218	1.4	H	-1.06	50.96	74.00	-23.04
5112.40	47.91	Ave	218	1.4	H	-1.06	46.85	54.00	-7.15
11200.00	41.16	PK	145	1.2	H	5.21	46.37	68.20	-21.83
11200.00	36.07	Ave	145	1.2	H	5.21	41.28	54.00	-12.72

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11a U-NII-2C High channel 5700MHz									
223.45	39.85	QP	13	1.0	H	-11.62	28.23	46.00	-17.77
223.45	35.05	QP	172	1.1	V	-11.62	23.43	46.00	-22.57
4526.36	50.57	PK	209	1.6	H	-2.24	48.33	74.00	-25.67
4526.36	45.14	Ave	209	1.6	H	-2.24	42.90	54.00	-11.10
5113.55	53.50	PK	30	1.2	H	-1.09	52.41	74.00	-21.59
5113.55	47.49	Ave	30	1.2	H	-1.09	46.40	54.00	-7.60
11400.00	41.23	PK	84	1.6	H	5.14	46.37	68.20	-21.83
11400.00	35.76	Ave	84	1.6	H	5.14	40.90	54.00	-13.10
802.11a U-NII-3 Low Channel 5745MHz									
223.45	40.80	QP	258	1.1	H	-11.62	29.18	46.00	-16.82
223.45	36.32	QP	160	1.1	V	-11.62	24.70	46.00	-21.30
4532.62	50.61	PK	6	1.4	H	-2.06	48.55	74.00	-25.45
4532.62	46.18	Ave	6	1.4	H	-2.06	44.12	54.00	-9.88
11490.00	41.55	PK	271	1.9	H	5.93	47.48	68.20	-20.72
11490.00	39.43	Ave	271	1.9	H	5.93	45.36	54.00	-8.64
5385.82	46.90	PK	97	1.8	H	-1.25	45.65	74.00	-28.35
5385.82	38.68	Ave	97	1.8	H	-1.25	37.43	54.00	-16.57

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11a U-NII-3 middle channel 5785MHz									
223.45	41.05	QP	11	1.1	H	-11.62	29.43	46.00	-16.57
223.45	36.02	QP	224	1.8	V	-11.62	24.40	46.00	-21.60
4503.12	50.86	PK	38	1.9	H	-2.03	48.83	74.00	-25.17
4503.12	45.11	Ave	38	1.9	H	-2.03	43.08	54.00	-10.92
11570.00	41.74	PK	234	1.7	H	5.81	47.55	68.20	-20.65
11570.00	39.56	Ave	234	1.7	H	5.81	45.37	54.00	-8.63
5380.67	45.96	PK	171	1.4	H	-1.22	44.74	74.00	-29.26
5380.67	39.61	Ave	171	1.4	H	-1.22	38.39	54.00	-15.61
802.11a U-NII-3 High channel 5825MHz									
223.45	40.46	QP	340	1.6	H	-11.62	28.84	46.00	-17.16
223.45	36.51	QP	172	1.9	V	-11.62	24.89	46.00	-21.11
4524.23	50.46	PK	251	1.2	H	-1.84	48.62	74.00	-25.38
4524.23	44.17	Ave	251	1.2	H	-1.84	42.33	54.00	-11.67
11650.00	41.36	PK	268	1.5	H	5.84	47.20	68.20	-21.00
11650.00	39.64	Ave	268	1.5	H	5.84	45.48	54.00	-8.52
5386.92	45.16	PK	59	1.1	H	-1.30	43.86	74.00	-30.14
5386.92	39.67	Ave	59	1.1	H	-1.30	38.37	54.00	-15.63

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	39.68	QP	250	2.0	H	-11.62	28.06	46.00	-17.94
223.45	34.75	QP	7	1.3	V	-11.62	23.13	46.00	-22.87
4528.77	51.22	PK	248	1.1	H	-2.14	49.08	74.00	-24.92
4528.77	48.16	Ave	248	1.1	H	-2.14	46.02	54.00	-7.98
5126.54	48.27	PK	31	1.4	H	-1.06	47.21	74.00	-26.79
5126.54	38.75	Ave	31	1.4	H	-1.06	37.69	54.00	-16.31
10360.00	40.53	PK	220	1.1	H	5.33	45.86	74.00	-28.14
10360.00	36.82	Ave	220	1.1	H	5.33	42.15	54.00	-11.85
802.11n(HT20) U-NII-1 Middle channel 5200MHz									
223.45	40.42	QP	72	1.2	H	-11.62	28.80	46.00	-17.20
223.45	34.80	QP	188	1.4	V	-11.62	23.18	46.00	-22.82
4529.37	52.63	PK	279	1.9	H	-2.12	50.51	74.00	-23.49
4529.37	48.43	Ave	279	1.9	H	-2.12	46.31	54.00	-7.69
5115.23	48.67	PK	328	1.0	H	-1.06	47.61	74.00	-26.39
5115.23	38.66	Ave	328	1.0	H	-1.06	37.60	54.00	-16.40
10400.00	42.58	PK	56	2.0	H	5.21	47.79	74.00	-26.21
10400.00	38.68	Ave	56	2.0	H	5.21	43.89	54.00	-10.11

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11n(HT20) U-NII-1 High channel 5240MHz									
223.45	40.77	QP	296	1.5	H	-11.62	29.15	46.00	-16.85
223.45	35.52	QP	343	1.6	V	-11.62	23.90	46.00	-22.10
4529.36	51.59	PK	188	1.5	H	-1.96	49.63	74.00	-24.37
4529.36	49.39	Ave	188	1.5	H	-1.96	47.43	54.00	-6.57
5142.08	49.44	PK	251	1.1	H	-1.06	48.38	74.00	-25.62
5142.08	39.36	Ave	251	1.1	H	-1.06	38.30	54.00	-15.70
10480.00	42.20	PK	181	1.0	H	5.14	47.34	74.00	-26.66
10480.00	37.54	Ave	181	1.0	H	5.14	42.68	54.00	-11.32
802.11n(HT20) U-NII-2A Low Channel 5260MHz									
223.45	39.81	QP	24	1.7	H	-11.62	28.19	46.00	-17.81
223.45	40.80	QP	217	1.3	V	-11.62	29.18	46.00	-16.82
4507.21	38.15	PK	155	1.3	H	-2.03	36.12	74.00	-37.88
4507.21	47.80	Ave	155	1.3	H	-2.03	45.77	54.00	-8.23
5132.77	37.58	PK	112	1.5	H	-1.02	36.56	74.00	-37.44
5132.77	1.78	Ave	112	1.5	H	-1.02	0.76	54.00	-53.24
10520.00	37.45	PK	16	1.1	H	5.33	42.78	74.00	-31.22
10520.00	35.45	Ave	16	1.1	H	5.33	40.78	54.00	-13.22

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT20) U-NII-2A middle channel 5280MHz									
223.45	39.99	QP	83	1.1	H	-11.62	28.37	46.00	-17.63
223.45	40.74	QP	339	1.2	V	-11.62	29.12	46.00	-16.88
4513.10	37.02	PK	75	2.0	H	-1.94	35.08	74.00	-38.92
4513.10	48.39	Ave	75	2.0	H	-1.94	46.45	54.00	-7.55
5148.28	38.62	PK	49	1.0	H	-1.06	37.56	74.00	-36.44
5148.28	1.57	Ave	49	1.0	H	-1.06	0.51	54.00	-53.49
10560.00	36.52	PK	272	1.1	H	5.21	41.73	74.00	-32.27
10560.00	35.13	Ave	272	1.1	H	5.21	40.34	54.00	-13.66
802.11n(HT20) U-NII-2A High channel 5320MHz									
223.45	39.30	QP	248	1.7	H	-11.62	27.68	46.00	-18.32
223.45	40.94	QP	352	2.0	V	-11.62	29.32	46.00	-16.68
4529.58	36.03	PK	250	1.3	H	-2.24	33.79	74.00	-40.21
4529.58	47.02	Ave	250	1.3	H	-2.24	44.78	54.00	-9.22
5139.35	38.78	PK	300	1.0	H	-1.09	37.69	74.00	-36.31
5139.35	0.91	Ave	300	1.0	H	-1.09	-0.18	54.00	-54.18
10640.00	37.95	PK	54	1.2	H	5.14	43.09	68.20	-25.11
10640.00	34.08	Ave	54	1.2	H	5.14	39.22	54.00	-14.78

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-2C Low Channel 5500MHz									
223.45	40.07	QP	66	1.2	H	-11.62	28.45	46.00	-17.55
223.45	0.56	QP	282	1.8	V	-11.62	-11.06	46.00	-57.06
4509.31	37.41	PK	256	1.5	H	-2.03	35.38	74.00	-38.62
4509.31	35.19	Ave	256	1.5	H	-2.03	33.16	54.00	-20.84
5120.31	48.25	PK	128	1.2	H	-1.02	47.23	74.00	-26.77
5120.31	37.46	Ave	128	1.2	H	-1.02	36.44	54.00	-17.56
11000.00	1.40	PK	314	1.2	H	5.33	6.73	68.20	-61.47
11000.00	40.43	Ave	314	1.2	H	5.33	45.76	54.00	-8.24
802.11n(HT20) U-NII-2C Middle channel 5600MHz									
223.45	39.61	QP	340	1.1	H	-11.62	27.99	46.00	-18.01
223.45	-0.16	QP	124	1.7	V	-11.62	-11.78	46.00	-57.78
4523.91	38.69	PK	282	1.1	H	-1.94	36.75	74.00	-37.25
4523.91	35.05	Ave	282	1.1	H	-1.94	33.11	54.00	-20.89
5129.66	47.80	PK	2	1.0	H	-1.06	46.74	74.00	-27.26
5129.66	36.61	Ave	2	1.0	H	-1.06	35.55	54.00	-18.45
11200.00	2.23	PK	103	1.6	H	5.21	7.44	68.20	-60.76
11200.00	38.95	Ave	103	1.6	H	5.21	44.16	54.00	-9.84

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11n(HT20) U-NII-2C High channel 5700MHz									
223.45	40.74	QP	235	1.4	H	-11.62	29.12	46.00	-16.88
223.45	-0.56	QP	37	1.6	V	-11.62	-12.18	46.00	-58.18
4509.85	37.82	PK	297	1.6	H	-2.24	35.58	74.00	-38.42
4509.85	33.93	Ave	297	1.6	H	-2.24	31.69	54.00	-22.31
5147.35	47.83	PK	340	1.2	H	-1.09	46.74	74.00	-27.26
5147.35	38.45	Ave	340	1.2	H	-1.09	37.36	54.00	-16.64
11400.00	0.36	PK	137	1.3	H	5.14	5.50	68.20	-62.70
11400.00	39.59	Ave	137	1.3	H	5.14	44.73	54.00	-9.27
802.11n(HT20) U-NII-3 Low Channel 5745MHz									
223.45	35.08	QP	54	1.0	H	-11.62	23.46	46.00	-22.54
223.45	51.11	QP	323	1.6	V	-11.62	39.49	46.00	-6.51
4536.73	49.75	PK	241	2.0	H	-2.06	47.69	74.00	-26.31
4536.73	50.54	Ave	241	2.0	H	-2.06	48.48	54.00	-5.52
11490.00	36.08	PK	268	1.9	H	5.93	42.01	68.20	-26.19
11490.00	45.09	Ave	268	1.9	H	5.93	51.02	54.00	-2.98
5369.87	45.30	PK	292	1.1	H	-1.25	44.05	74.00	-29.95
5369.87	39.28	Ave	292	1.1	H	-1.25	38.03	54.00	-15.97

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	34.70	QP	166	1.2	H	-11.62	23.08	46.00	-22.92
223.45	51.09	QP	122	1.4	V	-11.62	39.47	46.00	-6.53
4518.12	50.30	PK	216	1.1	H	-2.03	48.27	74.00	-25.73
4518.12	49.13	Ave	216	1.1	H	-2.03	47.10	54.00	-6.90
11570.00	35.68	PK	221	1.1	H	5.81	41.49	68.20	-26.71
11570.00	46.67	Ave	221	1.1	H	5.81	52.48	54.00	-1.52
5383.70	46.70	PK	80	1.9	H	-1.22	45.48	74.00	-28.52
5383.70	37.98	Ave	80	1.9	H	-1.22	36.76	54.00	-17.24
802.11n(HT20) U-NII-3 High channel 5825MHz									
223.45	35.04	QP	223	1.1	H	-11.62	23.42	46.00	-22.58
223.45	50.46	QP	65	1.8	V	-11.62	38.84	46.00	-7.16
4531.25	49.95	PK	282	1.8	H	-1.84	48.11	74.00	-25.89
4531.25	49.28	Ave	282	1.8	H	-1.84	47.44	54.00	-6.56
11650.00	36.49	PK	116	1.1	H	5.84	42.33	68.20	-25.87
11650.00	45.15	Ave	116	1.1	H	5.84	50.99	54.00	-3.01
5369.34	46.45	PK	70	1.8	H	-1.30	45.15	74.00	-28.85
5369.34	39.24	Ave	70	1.8	H	-1.30	37.94	54.00	-16.06

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11ac(HT20) U-NII-1 Low Channel 5180MHz									
223.45	37.76	QP	52	1.9	H	-11.62	26.14	46.00	-19.86
223.45	46.43	QP	54	1.5	V	-11.62	34.81	46.00	-11.19
4502.56	46.70	PK	152	1.9	H	-1.86	44.84	74.00	-29.16
4502.56	39.35	Ave	152	1.9	H	-1.86	37.49	54.00	-16.51
5149.19	41.03	PK	317	1.1	H	-1.06	39.97	74.00	-34.03
5149.19	35.96	Ave	317	1.1	H	-1.06	34.90	54.00	-19.10
10360.00	46.46	PK	62	1.5	H	5.33	51.79	74.00	-22.21
10360.00	38.37	Ave	62	1.5	H	5.33	43.70	54.00	-10.30
802.11ac(HT20) U-NII-1 Middle channel 5200MHz									
223.45	37.87	QP	231	1.0	H	-11.62	26.25	46.00	-19.75
223.45	47.42	QP	117	1.5	V	-11.62	35.80	46.00	-10.20
4506.52	46.40	PK	105	1.4	H	-1.82	44.58	74.00	-29.42
4506.52	40.24	Ave	105	1.4	H	-1.82	38.42	54.00	-15.58
5118.52	42.16	PK	262	1.7	H	-1.06	41.10	74.00	-32.90
5118.52	35.78	Ave	262	1.7	H	-1.06	34.72	54.00	-19.28
10400.00	42.64	PK	263	1.2	H	5.21	47.85	74.00	-26.15
10400.00	39.09	Ave	263	1.2	H	5.21	44.30	54.00	-9.70

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11ac(HT20) U-NII-1 High channel 5240MHz									
223.45	37.10	QP	262	1.5	H	-11.62	25.48	46.00	-20.52
223.45	47.22	QP	328	1.4	V	-11.62	35.60	46.00	-10.40
4505.53	45.81	PK	244	1.6	H	-1.81	44.00	74.00	-30.00
4505.53	41.06	Ave	244	1.6	H	-1.81	39.25	54.00	-14.75
5132.08	42.63	PK	230	1.5	H	-1.06	41.57	74.00	-32.43
5132.08	35.75	Ave	230	1.5	H	-1.06	34.69	54.00	-19.31
10480.00	41.67	PK	207	1.1	H	5.14	46.81	74.00	-27.19
10480.00	37.50	Ave	207	1.1	H	5.14	42.64	54.00	-11.36
802.11ac(HT20) U-NII-2A Low Channel 5260MHz									
223.45	42.95	QP	100	1.1	H	-11.62	31.33	46.00	-14.67
223.45	35.11	QP	31	1.5	V	-11.62	23.49	46.00	-22.51
4537.56	41.59	PK	237	1.8	H	-2.03	39.56	74.00	-34.44
4537.56	36.15	Ave	237	1.8	H	-2.03	34.12	54.00	-19.88
5114.10	45.68	PK	253	1.2	H	-1.02	44.66	74.00	-29.34
5114.10	37.73	Ave	253	1.2	H	-1.02	36.71	54.00	-17.29
10520.00	41.19	PK	32	1.1	H	5.33	46.52	74.00	-27.48
10520.00	36.83	Ave	32	1.1	H	5.33	42.16	54.00	-11.84

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11ac(HT20) U-NII-2A middle channel 5280MHz									
223.45	44.14	QP	289	1.3	H	-11.62	32.52	46.00	-13.48
223.45	33.73	QP	264	1.8	V	-11.62	22.11	46.00	-23.89
4502.14	41.36	PK	345	1.7	H	-1.94	39.42	74.00	-34.58
4502.14	36.54	Ave	345	1.7	H	-1.94	34.60	54.00	-19.40
5120.73	45.60	PK	83	1.4	H	-1.06	44.54	74.00	-29.46
5120.73	39.40	Ave	83	1.4	H	-1.06	38.34	54.00	-15.66
10560.00	39.85	PK	222	2.0	H	5.21	45.06	74.00	-28.94
10560.00	36.75	Ave	222	2.0	H	5.21	41.96	54.00	-12.04
802.11ac(HT20) U-NII-2A High channel 5320MHz									
223.45	44.11	QP	115	1.4	H	-11.62	32.49	46.00	-13.51
223.45	33.82	QP	106	1.7	V	-11.62	22.20	46.00	-23.80
4508.32	42.73	PK	187	1.3	H	-2.24	40.49	74.00	-33.51
4508.32	37.92	Ave	187	1.3	H	-2.24	35.68	54.00	-18.32
5133.21	44.73	PK	316	1.1	H	-1.09	43.64	74.00	-30.36
5133.21	40.62	Ave	316	1.1	H	-1.09	39.53	54.00	-14.47
10640.00	40.87	PK	161	1.2	H	5.14	46.01	68.20	-22.19
10640.00	38.05	Ave	161	1.2	H	5.14	43.19	54.00	-10.81

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-2C Low Channel 5500MHz									
223.45	45.99	QP	106	1.3	H	-11.62	34.37	46.00	-11.63
223.45	40.15	QP	261	2.0	V	-11.62	28.53	46.00	-17.47
4502.03	39.79	PK	171	1.8	H	-2.03	37.76	74.00	-36.24
4502.03	38.61	Ave	171	1.8	H	-2.03	36.58	54.00	-17.42
5145.63	47.60	PK	332	1.1	H	-1.02	46.58	74.00	-27.42
5145.63	37.04	Ave	332	1.1	H	-1.02	36.02	54.00	-17.98
11000.00	-0.01	PK	346	1.6	H	5.33	5.32	68.20	-62.88
11000.00	43.70	Ave	346	1.6	H	5.33	49.03	54.00	-4.97
802.11ac(HT20) U-NII-2C Middle channel 5600MHz									
223.45	46.95	QP	232	1.8	H	-11.62	35.33	46.00	-10.67
223.45	38.96	QP	140	1.2	V	-11.62	27.34	46.00	-18.66
4503.24	39.38	PK	276	1.2	H	-1.94	37.44	74.00	-36.56
4503.24	38.94	Ave	276	1.2	H	-1.94	37.00	54.00	-17.00
5136.55	49.07	PK	0	1.8	H	-1.06	48.01	74.00	-25.99
5136.55	38.38	Ave	0	1.8	H	-1.06	37.32	54.00	-16.68
11200.00	-1.42	PK	153	1.4	H	5.21	3.79	68.20	-64.41
11200.00	43.08	Ave	153	1.4	H	5.21	48.29	54.00	-5.71

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11ac(HT20) U-NII-2C High channel 5700MHz									
223.45	47.14	QP	281	2.0	H	-11.62	35.52	46.00	-10.48
223.45	37.47	QP	107	1.0	V	-11.62	25.85	46.00	-20.15
4528.23	40.28	PK	90	1.4	H	-2.24	38.04	74.00	-35.96
4528.23	38.41	Ave	90	1.4	H	-2.24	36.17	54.00	-17.83
5148.31	49.22	PK	120	1.2	H	-1.09	48.13	74.00	-25.87
5148.31	39.56	Ave	120	1.2	H	-1.09	38.47	54.00	-15.53
11400.00	0.04	PK	278	1.0	H	5.14	5.18	68.20	-63.02
11400.00	43.92	Ave	278	1.0	H	5.14	49.06	54.00	-4.94
802.11ac(HT20) U-NII-3 Low Channel 5745MHz									
223.45	38.02	QP	132	1.8	H	-11.62	26.40	46.00	-19.60
223.45	47.58	QP	147	1.7	V	-11.62	35.96	46.00	-10.04
4507.58	44.33	PK	295	1.9	H	-1.92	42.41	74.00	-31.59
4507.58	38.99	Ave	295	1.9	H	-1.92	37.07	54.00	-16.93
11490.00	39.54	PK	40	1.8	H	5.93	45.47	68.20	-22.73
11490.00	35.36	Ave	40	1.8	H	5.93	41.29	54.00	-12.71
5383.92	46.20	PK	70	1.1	H	-1.03	45.17	74.00	-28.83
5383.92	39.37	Ave	70	1.1	H	-1.03	38.34	54.00	-15.66

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11ac(HT20) U-NII-3 middle channel 5785MHz									
223.45	37.14	QP	221	1.6	H	-11.62	25.52	46.00	-20.48
223.45	47.97	QP	225	1.3	V	-11.62	36.35	46.00	-9.65
4512.53	45.00	PK	229	1.7	H	-1.97	43.03	74.00	-30.97
4512.53	39.53	Ave	229	1.7	H	-1.97	37.56	54.00	-16.44
11570.00	42.63	PK	149	1.9	H	5.81	48.44	68.20	-19.76
11570.00	38.01	Ave	149	1.9	H	5.81	43.82	54.00	-10.18
5376.19	46.77	PK	252	1.4	H	-1.05	45.72	74.00	-28.28
5376.19	38.61	Ave	252	1.4	H	-1.05	37.56	54.00	-16.44
802.11ac(HT20) U-NII-3 High channel 5825MHz									
223.45	37.82	QP	309	1.4	H	-11.62	26.20	46.00	-19.80
223.45	48.82	QP	188	1.9	V	-11.62	37.20	46.00	-8.80
4528.40	44.54	PK	21	1.1	H	-1.88	42.66	74.00	-31.34
4528.40	40.37	Ave	21	1.1	H	-1.88	38.49	54.00	-15.51
11650.00	40.74	PK	107	1.8	H	5.84	46.58	68.20	-21.62
11650.00	38.02	Ave	107	1.8	H	5.84	43.86	54.00	-10.14
5384.17	46.69	PK	312	1.5	H	-1.06	45.63	74.00	-28.37
5384.17	38.78	Ave	312	1.5	H	-1.06	37.72	54.00	-16.28

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11n(HT40) U-NII-1 Low Channel 5190MHz									
223.45	37.92	QP	269	1.4	H	-11.62	26.30	46.00	-19.70
223.45	47.39	QP	136	1.2	V	-11.62	35.77	46.00	-10.23
4502.54	42.07	PK	309	1.1	H	-1.89	40.18	74.00	-33.82
4502.54	38.70	Ave	309	1.1	H	-1.89	36.81	54.00	-17.19
5128.09	48.01	PK	39	1.6	H	-1.06	46.95	74.00	-27.05
5128.09	39.75	Ave	39	1.6	H	-1.06	38.69	54.00	-15.31
10380.00	39.55	PK	151	1.9	H	5.26	44.81	74.00	-29.19
10380.00	37.07	Ave	151	1.9	H	5.26	42.33	54.00	-11.67
802.11n(HT40) U-NII-1 High channel 5230MHz									
223.45	37.54	QP	77	1.5	H	-11.62	25.92	46.00	-20.08
223.45	47.68	QP	320	1.4	V	-11.62	36.06	46.00	-9.94
4504.87	42.48	PK	90	1.1	H	-1.94	40.54	74.00	-33.46
4504.87	39.63	Ave	90	1.1	H	-1.94	37.69	54.00	-16.31
5124.17	47.40	PK	323	1.3	H	-1.06	46.34	74.00	-27.66
5124.17	41.51	Ave	323	1.3	H	-1.06	40.45	54.00	-13.55
10460.00	42.09	PK	228	1.6	H	5.28	47.37	74.00	-26.63
10480.00	38.27	Ave	228	1.6	H	5.28	43.55	54.00	-10.45

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11n(HT40) U-NII-2A Low Channel 5270MHz									
223.45	48.06	QP	31	1.7	H	-11.62	36.44	46.00	-9.56
223.45	40.98	QP	193	1.9	V	-11.62	29.36	46.00	-16.64
4531.32	43.06	PK	178	1.2	H	-1.89	41.17	74.00	-32.83
4531.32	38.35	Ave	178	1.2	H	-1.89	36.46	54.00	-17.54
5126.84	46.71	PK	198	1.9	H	-1.06	45.65	74.00	-28.35
5126.84	37.22	Ave	198	1.9	H	-1.06	36.16	54.00	-17.84
10540.00	46.27	PK	340	1.8	H	5.26	51.53	74.00	-22.47
10540.00	38.64	Ave	340	1.8	H	5.26	43.90	54.00	-10.10
802.11n(HT40) U-NII-2A High channel 5310MHz									
223.45	47.35	QP	183	1.9	H	-11.62	35.73	46.00	-10.27
223.45	39.99	QP	128	1.8	V	-11.62	28.37	46.00	-17.63
4515.47	42.12	PK	269	1.7	H	-1.94	40.18	74.00	-33.82
4515.47	38.44	Ave	269	1.7	H	-1.94	36.50	54.00	-17.50
5111.70	46.93	PK	273	1.4	H	-1.06	45.87	74.00	-28.13
5111.70	38.83	Ave	273	1.4	H	-1.06	37.77	54.00	-16.23
10620.00	40.79	PK	216	1.0	H	5.28	46.07	68.20	-22.13
10620.00	39.13	Ave	216	1.0	H	5.28	44.41	54.00	-9.59

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) U-NII-2C Low Channel 5510MHz									
223.45	46.28	QP	121	1.7	H	-11.62	34.66	46.00	-11.34
223.45	38.67	QP	274	1.3	V	-11.62	27.05	46.00	-18.95
4505.21	41.68	PK	279	1.9	H	-1.89	39.79	74.00	-34.21
4505.21	38.50	Ave	279	1.9	H	-1.89	36.61	54.00	-17.39
5131.54	46.48	PK	4	1.1	H	-1.06	45.42	74.00	-28.58
5131.54	37.75	Ave	4	1.1	H	-1.06	36.69	54.00	-17.31
11020.00	42.39	PK	85	1.5	H	5.26	47.65	68.20	-20.55
11020.00	35.87	Ave	85	1.5	H	5.26	41.13	54.00	-12.87
802.11n(HT40) U-NII-2C Middle channel 5550MHz									
223.45	48.49	QP	186	1.4	H	-11.62	36.87	46.00	-9.13
223.45	37.73	QP	205	1.6	V	-11.62	26.11	46.00	-19.89
4519.08	41.33	PK	174	1.4	H	-1.94	39.39	74.00	-34.61
4519.08	36.67	Ave	174	1.4	H	-1.94	34.73	54.00	-19.27
5148.26	45.67	PK	172	2.0	H	-1.06	44.61	74.00	-29.39
5148.26	38.48	Ave	172	2.0	H	-1.06	37.42	54.00	-16.58
11100.00	46.81	PK	349	1.3	H	5.28	52.09	68.20	-16.11
11100.00	39.18	Ave	349	1.3	H	5.28	44.46	54.00	-9.54
802.11n(HT40) U-NII-2C High channel 5670MHz									
223.45	46.65	QP	68	1.9	H	-11.62	35.03	46.00	-10.97
223.45	38.72	QP	264	1.7	V	-11.62	27.10	46.00	-18.90
4527.67	42.86	PK	196	1.9	H	-1.94	40.92	74.00	-33.08
4527.67	39.09	Ave	196	1.9	H	-1.94	37.15	54.00	-16.85
5148.01	46.14	PK	301	2.0	H	-1.06	45.08	74.00	-28.92
5148.01	37.46	Ave	301	2.0	H	-1.06	36.40	54.00	-17.60
11340.00	41.77	PK	171	1.3	H	5.28	47.05	68.20	-21.15
11340.00	37.47	Ave	171	1.3	H	5.28	42.75	54.00	-11.25

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	36.33	QP	323	1.3	H	-11.62	24.71	46.00	-21.29
223.45	46.59	QP	26	1.2	V	-11.62	34.97	46.00	-11.03
4504.84	41.18	PK	0	2.0	H	-1.96	39.22	74.00	-34.78
4504.84	37.59	Ave	0	2.0	H	-1.96	35.63	54.00	-18.37
11510.00	40.43	PK	63	1.1	H	5.88	46.31	68.20	-21.89
11510.00	35.80	Ave	63	1.1	H	5.88	41.68	54.00	-12.32
5378.50	46.85	PK	122	1.1	H	-1.01	45.84	74.00	-28.16
5378.50	39.07	Ave	122	1.1	H	-1.01	38.06	54.00	-15.94
802.11n(HT40) U-NII-3 High Channel 5795MHz									
223.45	37.10	QP	86	1.3	H	-11.62	25.48	46.00	-20.52
223.45	47.52	QP	153	1.6	V	-11.62	35.90	46.00	-10.10
4538.74	41.81	PK	138	1.7	H	-1.92	39.89	74.00	-34.11
4538.74	37.65	Ave	138	1.7	H	-1.92	35.73	54.00	-18.27
11590.00	41.48	PK	179	1.0	H	5.63	47.11	68.20	-21.09
11590.00	38.50	Ave	179	1.0	H	5.63	44.13	54.00	-9.87
5378.73	45.65	PK	325	1.9	H	-1.04	44.61	74.00	-29.39
5378.73	39.89	Ave	325	1.9	H	-1.04	38.85	54.00	-15.15

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11ac(HT40) U-NII-1 Low Channel 5190MHz									
223.45	38.22	QP	92	1.9	H	-11.62	26.60	46.00	-19.40
223.45	47.09	QP	349	1.4	V	-11.62	35.47	46.00	-10.53
4516.32	39.80	PK	100	1.6	H	-1.91	37.89	74.00	-36.11
4516.32	34.83	Ave	100	1.6	H	-1.91	32.92	54.00	-21.08
5148.45	45.57	PK	295	2.0	H	-1.06	44.51	74.00	-29.49
5148.45	41.34	Ave	295	2.0	H	-1.06	40.28	54.00	-13.72
10380.00	40.54	PK	94	1.7	H	5.26	45.80	74.00	-28.20
10380.00	36.21	Ave	94	1.7	H	5.26	41.47	54.00	-12.53
802.11ac(HT40) U-NII-1 High channel 5230MHz									
223.45	37.62	QP	251	1.7	H	-11.62	26.00	46.00	-20.00
223.45	46.48	QP	23	1.2	V	-11.62	34.86	46.00	-11.14
4509.77	38.84	PK	122	1.2	H	-1.93	36.91	74.00	-37.09
4509.77	35.30	Ave	122	1.2	H	-1.93	33.37	54.00	-20.63
5148.24	45.39	PK	74	1.6	H	-1.06	44.33	74.00	-29.67
5148.24	41.58	Ave	74	1.6	H	-1.06	40.52	54.00	-13.48
10460.00	41.52	PK	31	1.9	H	5.28	46.80	74.00	-27.20
10480.00	38.20	Ave	31	1.9	H	5.28	43.48	54.00	-10.52

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB μ V/m)	Margin (dB)
802.11ac(HT40) U-NII-2A Low Channel 5270MHz									
223.45	46.01	QP	113	2.0	H	-11.62	34.39	46.00	-11.61
223.45	42.52	QP	93	1.5	V	-11.62	30.90	46.00	-15.10
4509.19	42.33	PK	261	1.1	H	-1.89	40.44	74.00	-33.56
4509.19	38.49	Ave	261	1.1	H	-1.89	36.60	54.00	-17.40
5143.36	47.12	PK	192	1.7	H	-1.06	46.06	74.00	-27.94
5143.36	37.00	Ave	192	1.7	H	-1.06	35.94	54.00	-18.06
10540.00	35.21	PK	46	1.8	H	5.26	40.47	74.00	-33.53
10540.00	52.42	Ave	46	1.8	H	5.26	57.68	54.00	3.68
802.11ac(HT40) U-NII-2A High channel 5310MHz									
223.45	46.95	QP	3	1.6	H	-11.62	35.33	46.00	-10.67
223.45	41.67	QP	218	1.1	V	-11.62	30.05	46.00	-15.95
4522.72	41.42	PK	207	1.8	H	-1.94	39.48	74.00	-34.52
4522.72	39.23	Ave	207	1.8	H	-1.94	37.29	54.00	-16.71
5112.92	47.41	PK	26	1.1	H	-1.06	46.35	74.00	-27.65
5112.92	36.93	Ave	26	1.1	H	-1.06	35.87	54.00	-18.13
10620.00	-0.47	PK	308	1.0	H	5.28	4.81	68.20	-63.39
10620.00	37.66	Ave	308	1.0	H	5.28	42.94	54.00	-11.06

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11ac(HT40) U-NII-2C Low Channel 5510MHz									
223.45	46.54	QP	29	1.1	H	-11.62	34.92	46.00	-11.08
223.45	37.08	QP	135	1.2	V	-11.62	25.46	46.00	-20.54
4531.37	-0.94	PK	13	1.5	H	-1.89	-2.83	74.00	-76.83
4531.37	37.33	Ave	13	1.5	H	-1.89	35.44	54.00	-18.56
5141.05	45.75	PK	118	1.2	H	-1.06	44.69	74.00	-29.31
5141.05	39.75	Ave	118	1.2	H	-1.06	38.69	54.00	-15.31
11020.00	34.37	PK	244	1.7	H	5.26	39.63	68.20	-28.57
11020.00	52.35	Ave	244	1.7	H	5.26	57.61	54.00	3.61
802.11ac(HT40) U-NII-2C Middle channel 5550MHz									
223.45	47.78	QP	106	1.3	H	-11.62	36.16	46.00	-9.84
223.45	39.30	QP	12	1.1	V	-11.62	27.68	46.00	-18.32
4521.24	0.07	PK	27	1.1	H	-1.94	-1.87	74.00	-75.87
4521.24	39.04	Ave	27	1.1	H	-1.94	37.10	54.00	-16.90
5127.01	46.07	PK	14	1.1	H	-1.06	45.01	74.00	-28.99
5127.01	39.94	Ave	14	1.1	H	-1.06	38.88	54.00	-15.12
11100.00	37.46	PK	303	1.8	H	5.28	42.74	68.20	-25.46
11100.00	53.50	Ave	303	1.8	H	5.28	58.78	54.00	4.78
802.11ac(HT40) U-NII-2C High channel 5670MHz									
223.45	45.71	QP	260	1.7	H	-11.62	34.09	46.00	-11.91
223.45	37.22	QP	355	1.9	V	-11.62	25.60	46.00	-20.40
4508.33	0.15	PK	42	1.7	H	-1.94	-1.79	74.00	-75.79
4508.33	38.17	Ave	42	1.7	H	-1.94	36.23	54.00	-17.77
5132.78	46.09	PK	2	1.7	H	-1.06	45.03	74.00	-28.97
5132.78	40.76	Ave	2	1.7	H	-1.06	39.70	54.00	-14.30
11340.00	0.85	PK	347	1.9	H	5.28	6.13	68.20	-62.07
11340.00	39.47	Ave	347	1.9	H	5.28	44.75	54.00	-9.25

Frequency (MHz)	Receiver Reading (dB μ V)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor (dB)	Corrected Amplitude (dB μ V/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11ac(HT40) U-NII-3 Low Channel 5755MHz									
223.45	37.79	QP	120	1.7	H	-11.62	26.17	46.00	-19.83
223.45	45.97	QP	345	1.9	V	-11.62	34.35	46.00	-11.65
4517.37	36.87	PK	27	2.0	H	-1.92	34.95	74.00	-39.05
4517.37	32.85	Ave	27	2.0	H	-1.92	30.93	54.00	-23.07
11510.00	38.82	PK	217	1.1	H	5.88	44.70	68.20	-23.50
11510.00	36.29	Ave	217	1.1	H	5.88	42.17	54.00	-11.83
5371.82	45.33	PK	215	1.3	H	-1.07	44.26	74.00	-29.74
5371.82	39.64	Ave	215	1.3	H	-1.07	38.57	54.00	-15.43
802.11ac(HT40) U-NII-3 High Channel 5795MHz									
223.45	37.14	QP	9	1.8	H	-11.62	25.52	46.00	-20.48
223.45	45.27	QP	146	1.3	V	-11.62	33.65	46.00	-12.35
4520.14	36.68	PK	282	1.1	H	-1.86	34.82	74.00	-39.18
4520.14	32.60	Ave	282	1.1	H	-1.86	30.74	54.00	-23.26
11590.00	40.88	PK	37	1.4	H	5.63	46.51	68.20	-21.69
11590.00	38.68	Ave	37	1.4	H	5.63	44.31	54.00	-9.69
5359.08	45.55	PK	172	1.4	H	-1.03	44.52	74.00	-29.48
5359.08	39.48	Ave	172	1.4	H	-1.03	38.45	54.00	-15.55

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dBμV/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11ac(HT80) U-NII-1 Low Channel 5210MHz									
223.45	46.20	QP	298	1.7	H	-11.62	34.58	46.00	-11.42
4520.14	36.31	QP	21	1.4	V	-11.62	24.69	46.00	-21.31
4517.18	31.82	PK	126	1.0	H	-1.88	29.94	74.00	-44.06
4517.18	41.28	Ave	126	1.0	H	-1.88	39.40	54.00	-14.60
5126.41	37.90	PK	203	1.3	H	-1.06	36.84	74.00	-37.16
5126.41	46.61	Ave	203	1.3	H	-1.06	45.55	54.00	-8.45
10420.00	42.45	PK	39	1.5	H	4.65	47.10	74.00	-26.90
10420.00	37.59	Ave	39	1.5	H	4.65	42.24	54.00	-11.76
802.11ac(HT80) U-NII-2A Low Channel 5290MHz									
4520.14	36.37	QP	86	1.9	H	-11.62	24.75	46.00	-21.25
4517.18	30.89	QP	97	1.8	V	-11.62	19.27	46.00	-26.73
4507.97	40.48	PK	316	1.6	H	-1.88	38.60	74.00	-35.40
4507.97	37.12	Ave	316	1.6	H	-1.88	35.24	54.00	-18.76
5138.11	46.80	PK	205	1.5	H	-1.06	45.74	74.00	-28.26
5138.11	43.83	Ave	205	1.5	H	-1.06	42.77	54.00	-11.23
10580.00	38.99	PK	330	1.2	H	4.65	43.64	74.00	-30.36
10580.00	46.20	Ave	330	1.2	H	4.65	50.85	54.00	-3.15

Frequency (MHz)	Receiver Reading (dBμV)	Detector (PK/QP/Ave)	Turn table Angle Degree	RX Antenna		Corrected Factor	Corrected Amplitude (dBμV/m)	FCC Part 15.407/209/205	
				Height (m)	Polar (H/V)			Limit (dB)	Margin (dB)
802.11ac(HT80) U-NII-2C Low Channel 5530MHz									
4517.18	29.99	QP	285	1.2	H	-11.62	18.37	46.00	-27.63
4507.97	40.86	QP	88	1.8	V	-11.62	29.24	46.00	-16.76
4523.44	36.65	PK	206	1.4	H	-1.88	34.77	74.00	-39.23
4523.44	46.00	Ave	206	1.4	H	-1.88	44.12	54.00	-9.88
5145.64	43.08	PK	43	1.1	H	-1.06	42.02	74.00	-31.98
5145.64	38.49	Ave	43	1.1	H	-1.06	37.43	54.00	-16.57
11060.00	47.03	PK	316	1.6	H	4.65	51.68	68.20	-16.52
11060.00	38.50	Ave	316	1.6	H	4.65	43.15	54.00	-10.85
802.11ac(HT80) U-NII-3 Low channel 5775MHz									
4520.14	36.18	QP	271	1.4	H	-11.62	24.56	46.00	-21.44
4517.18	31.26	QP	8	1.9	V	-11.62	19.64	46.00	-26.36
4520.47	42.09	PK	258	1.0	H	-1.85	40.24	74.00	-33.76
4520.47	43.13	Ave	258	1.0	H	-1.85	41.28	54.00	-12.72
11550.00	41.51	PK	125	1.2	H	4.83	46.34	68.20	-21.86
11550.00	37.66	Ave	125	1.2	H	4.83	42.49	54.00	-11.51
5378.76	46.68	PK	262	1.8	H	-1.14	45.54	74.00	-28.46
5378.76	37.63	Ave	262	1.8	H	-1.14	36.49	54.00	-17.51

Test Frequency: 12GHz~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

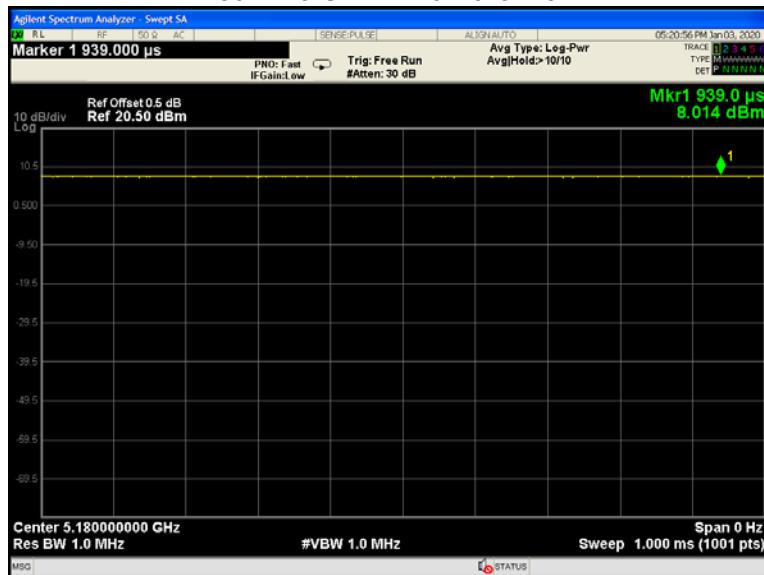
802.11a(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11n(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11ac(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	100	100	100
52	100	100	100
100	100	100	100
149	100	100	100
802.11n(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
54	100	100	100
102	100	100	100
151	100	100	100

802.11ac(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
54	100	100	100
102	100	100	100
151	100	100	100

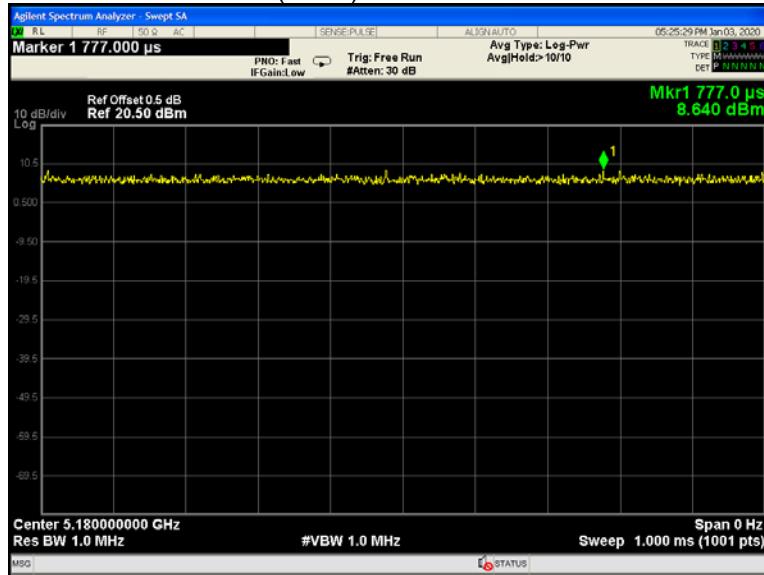
802.11ac(HT80) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	100	100	100
54	100	100	100
102	100	100	100
151	100	100	100

Test result plots shown as follows:

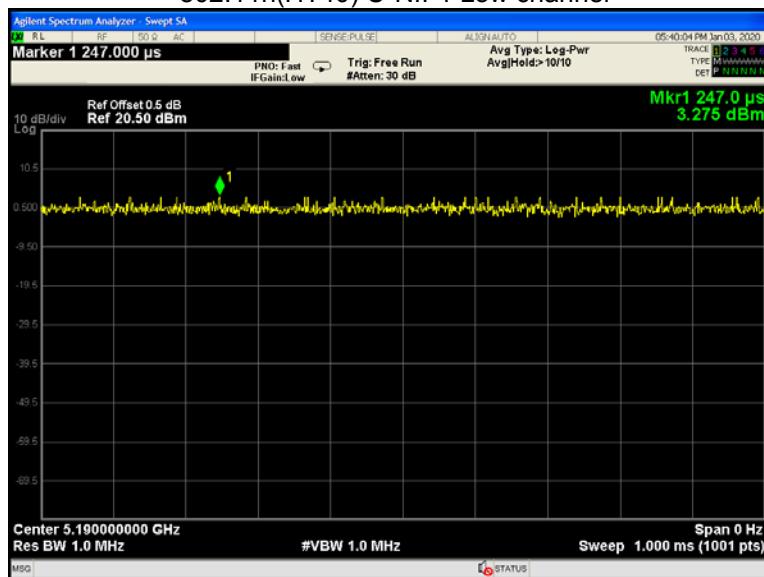
802.11a U-NII-1 Low channel



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



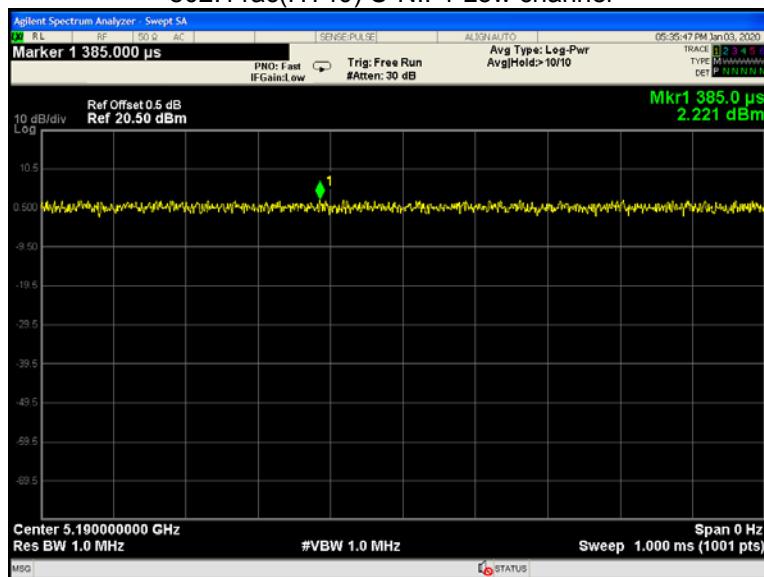
802.11n(HT40) U-NII-1 Low channel



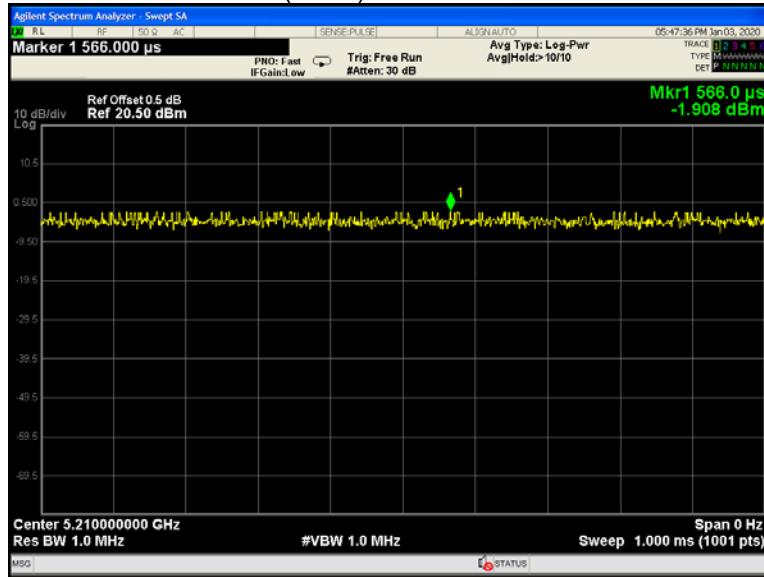
802.11ac(HT20) U-NII-1 Low channel



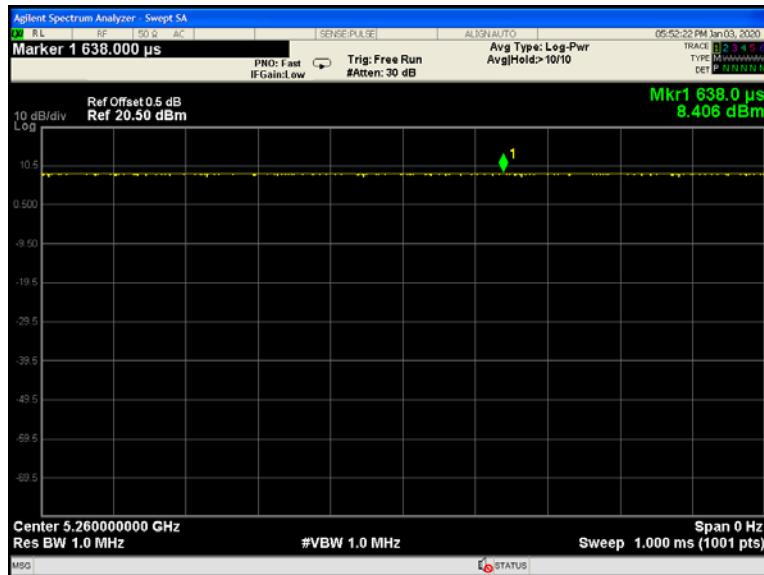
802.11ac(HT40) U-NII-1 Low channel



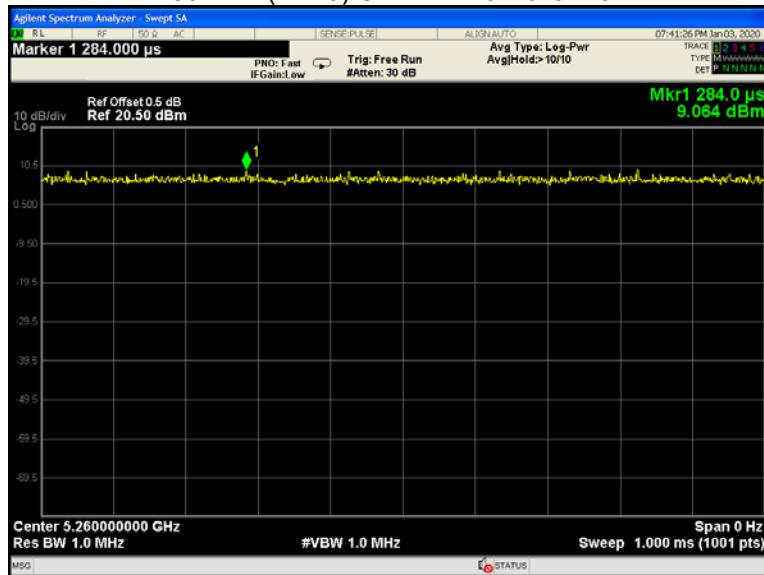
802.11ac(HT80) U-NII-1 Low channel



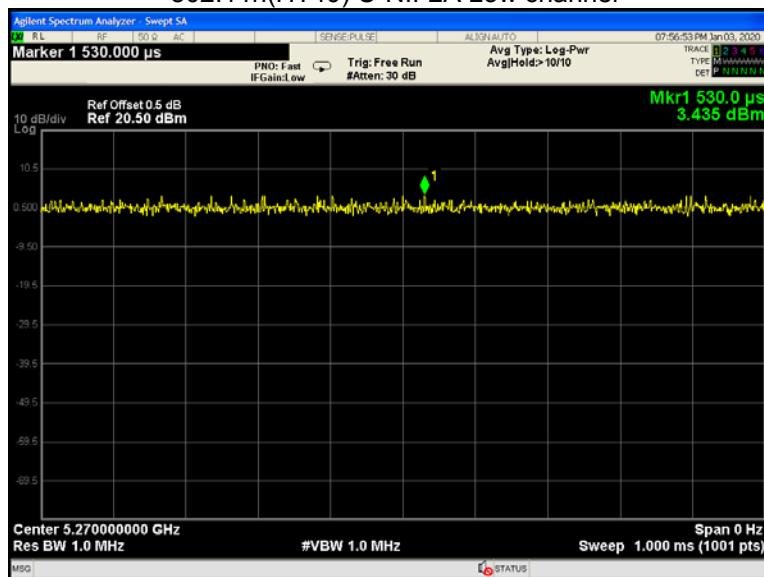
802.11a U-NII-2A Low channel



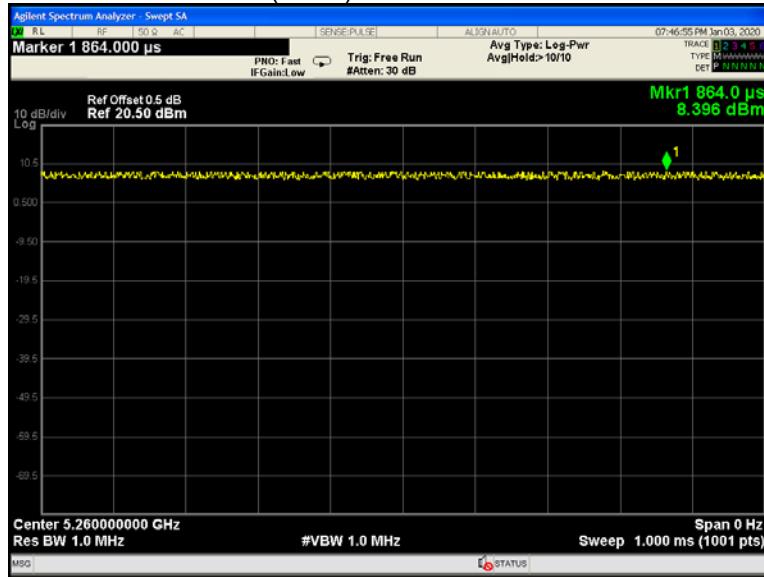
802.11n(HT20) U-NII-2A Low channel



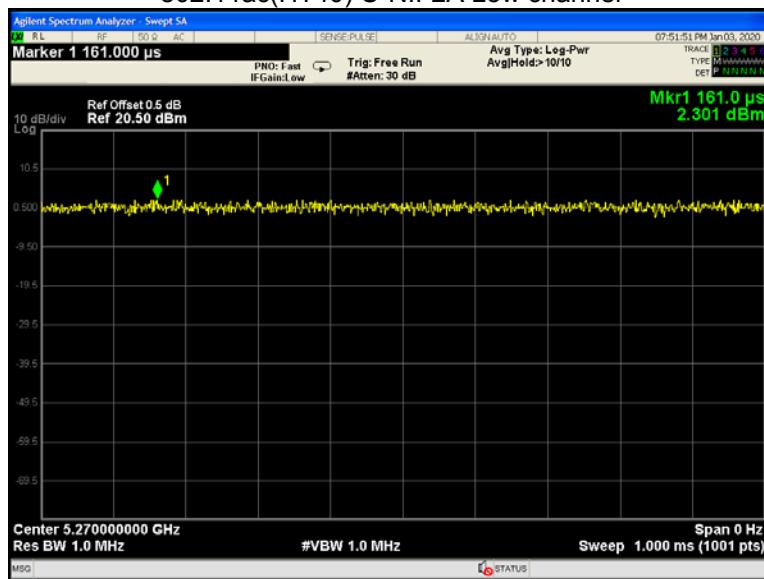
802.11n(HT40) U-NII-2A Low channel



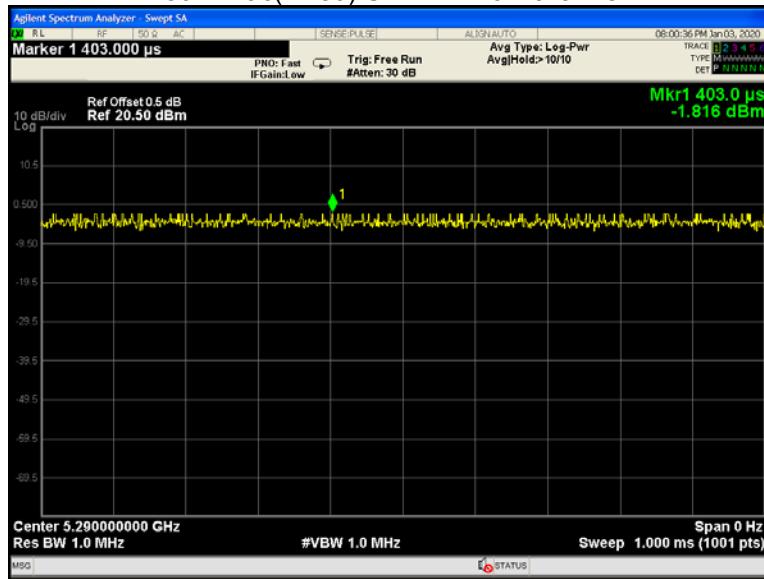
802.11ac(HT20) U-NII-2A Low channel



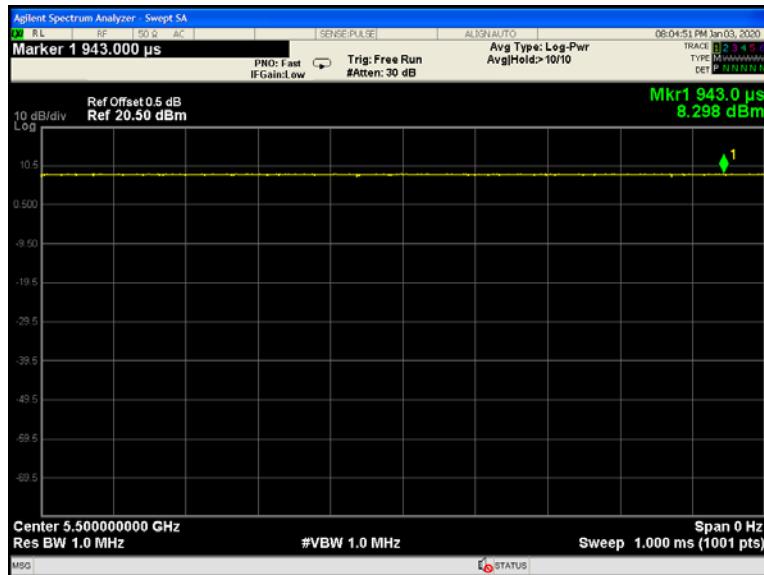
802.11ac(HT40) U-NII-2A Low channel



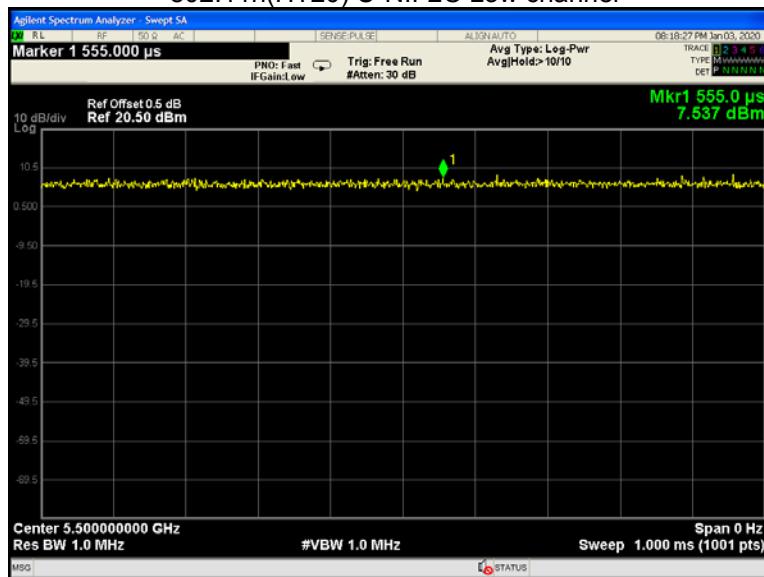
802.11ac(HT80) U-NII-2A Low channel



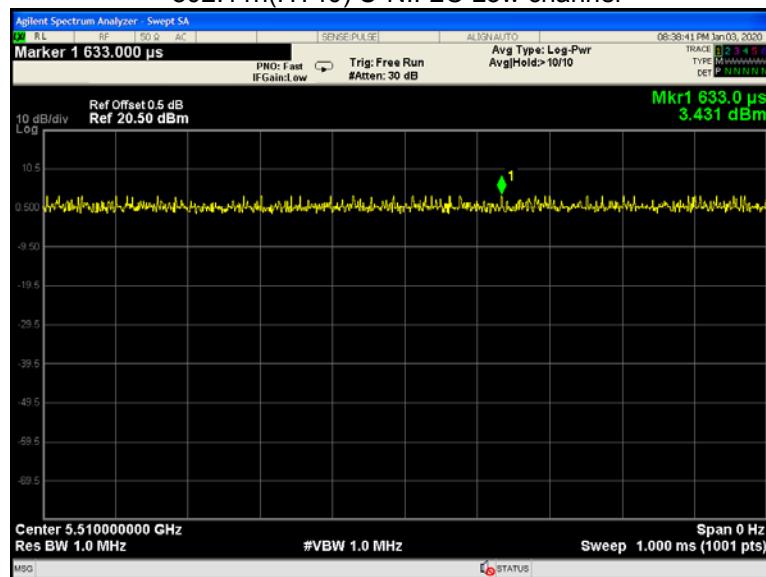
802.11a U-NII-2C Low channel



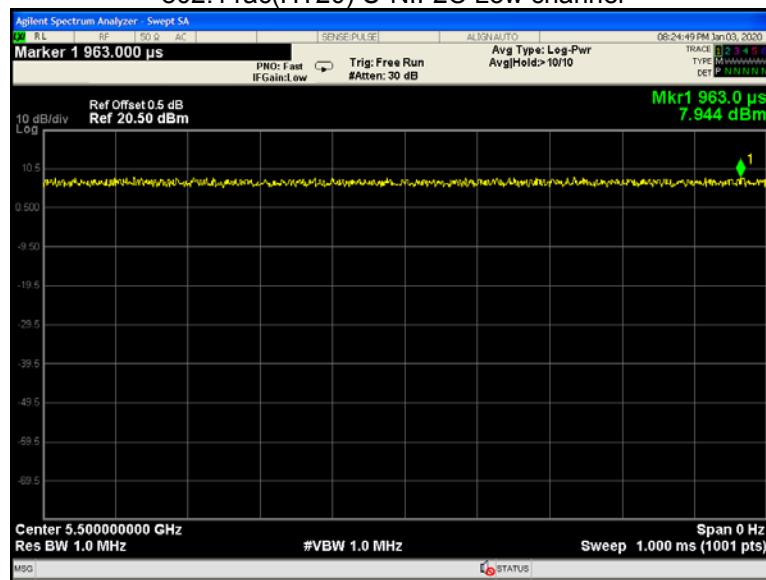
802.11n(HT20) U-NII-2C Low channel



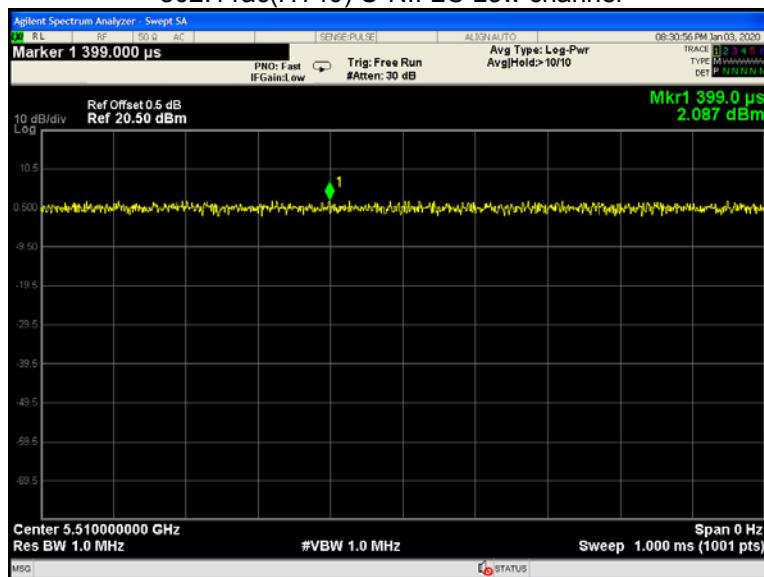
802.11n(HT40) U-NII-2C Low channel



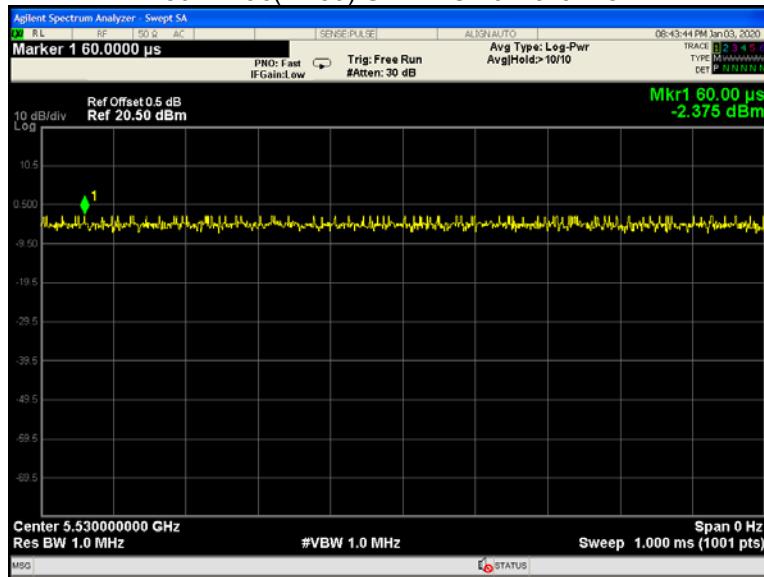
802.11ac(HT20) U-NII-2C Low channel



802.11ac(HT40) U-NII-2C Low channel



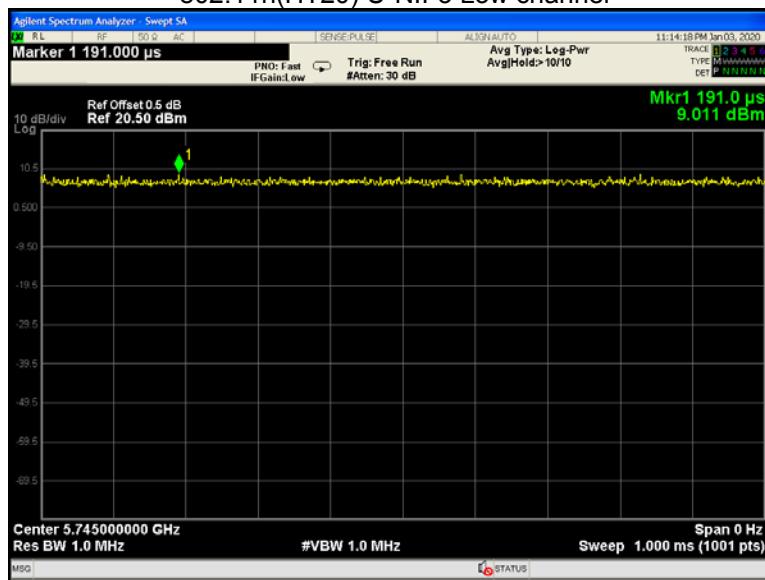
802.11ac(HT80) U-NII-2C Low channel



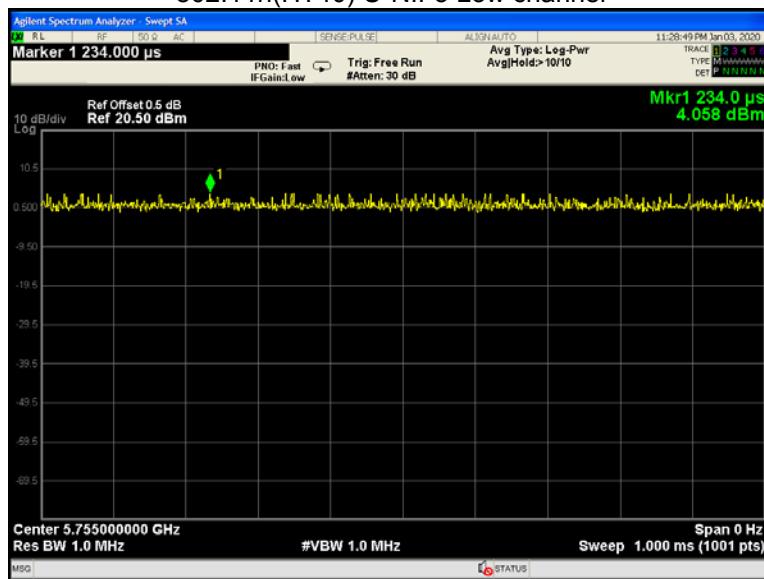
802.11a U-NII-3 Low channel



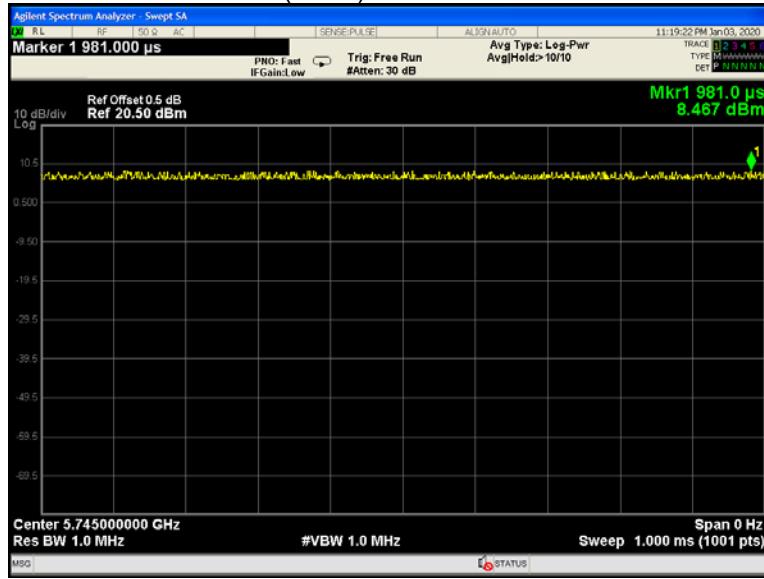
802.11n(HT20) U-NII-3 Low channel



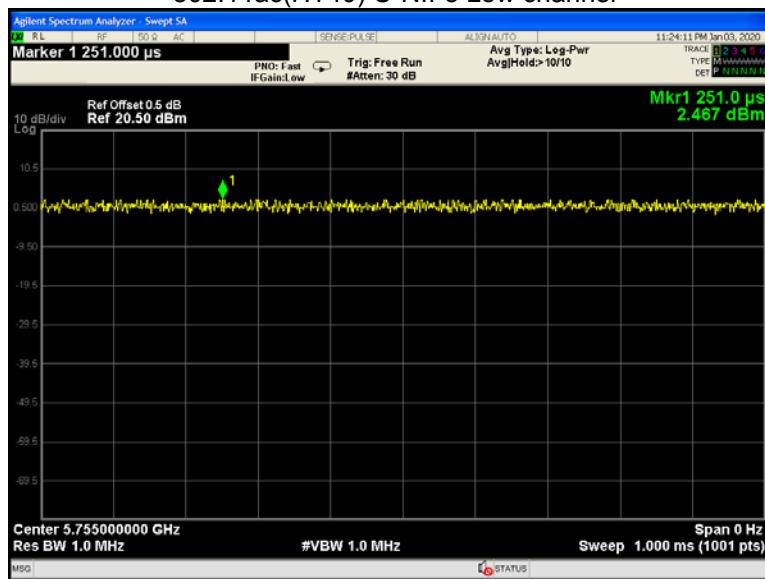
802.11n(HT40) U-NII-3 Low channel



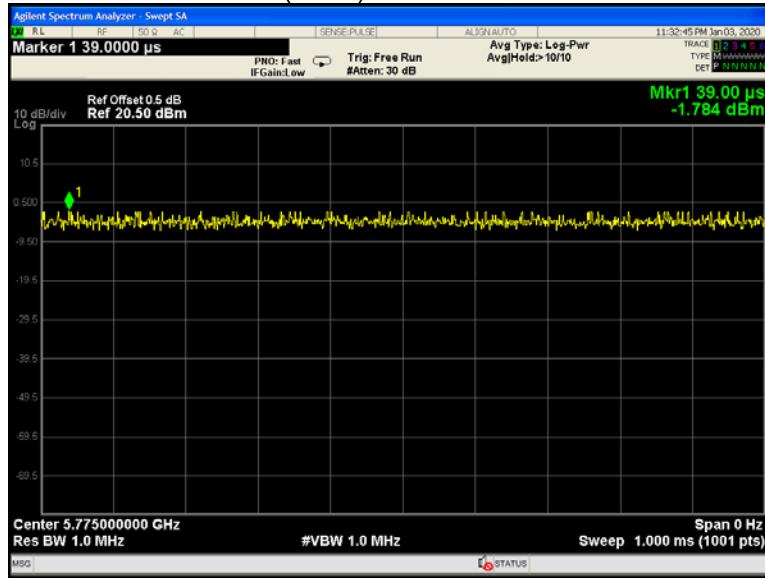
802.11ac(HT20) U-NII-3 Low channel



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



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



10 Band Edge

Test Requirement:	FCC CFR47 Part 15 Section 15.407
Test Method:	ANSI C63.10 2013
Test Limit:	<p>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.</p> <p>For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</p> <p>For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</p> <p>For transmitters operating in the 5.725-5.85 GHz band:</p> <p>(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p> <p>(ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.</p>
Test Result:	PASS

10.1 Test Procedure

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.

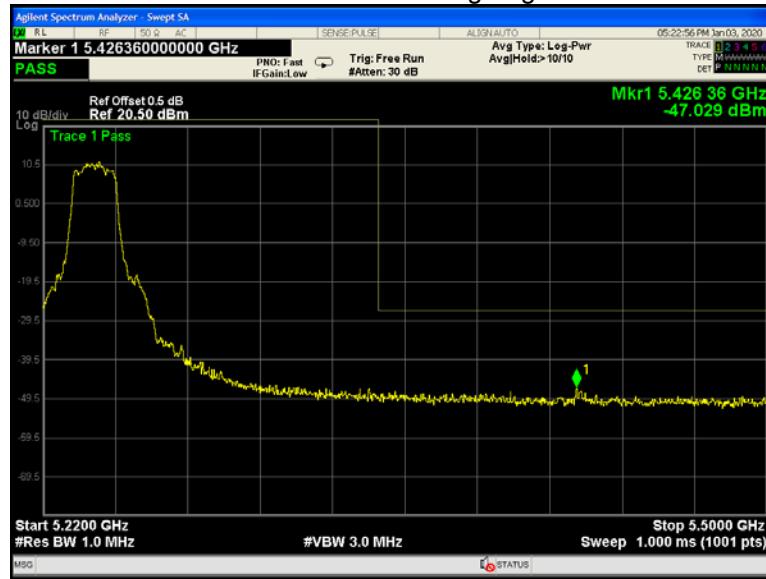
10.2 Test Result

Test result plots shown as follows:

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



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



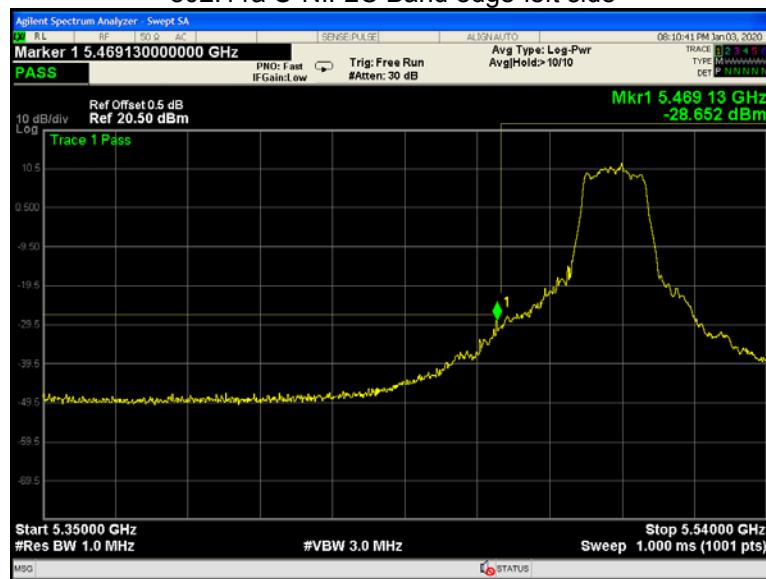
802.11a U-NII-2A Band edge-left side



802.11a U-NII-2A Band edge-right side



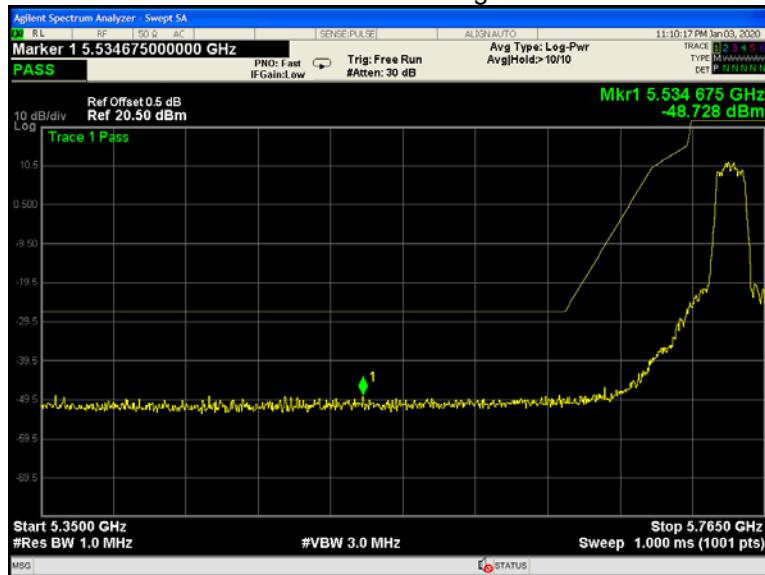
802.11a U-NII-2C Band edge-left side



802.11a U-NII-2C Band edge-right side



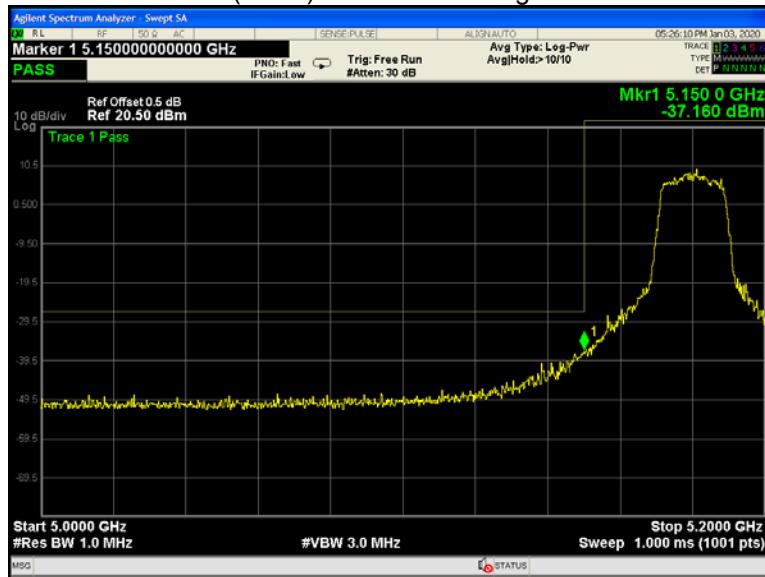
802.11a U-NII-3 Band edge-left side



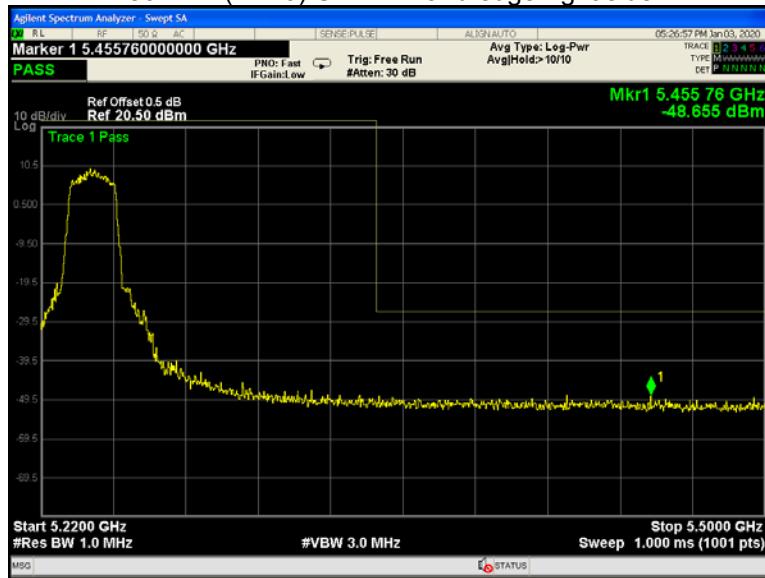
802.11a U-NII-3 Band edge-right side



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-2A Band edge-left side



802.11n(HT20) U-NII-2A Band edge-right side



802.11n(HT20) U-NII-2C Band edge-left side



802.11n(HT20) U-NII-2C Band edge-right side



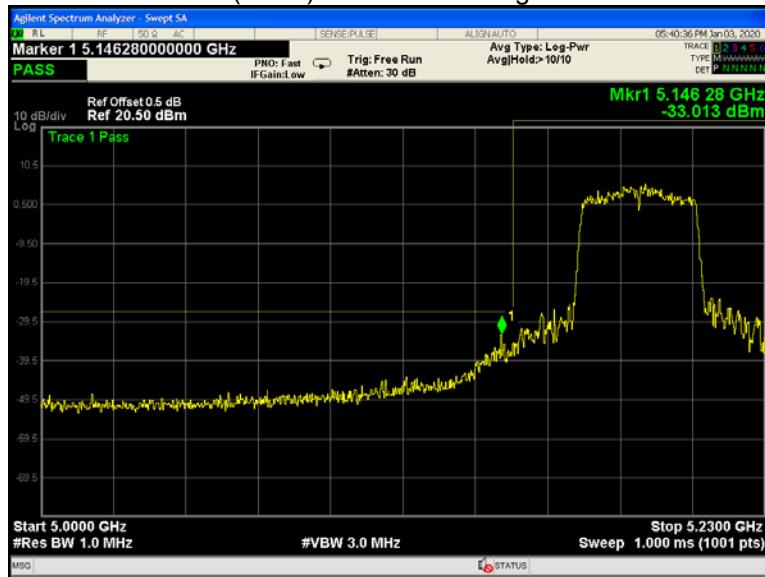
802.11n(HT20) U-NII-3 Band edge-left side



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-2A Band edge-left side



802.11n(HT40) U-NII-2A Band edge-right side



802.11n(HT40) U-NII-2C Band edge-left side



802.11n(HT40) U-NII-2C Band edge-right side



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



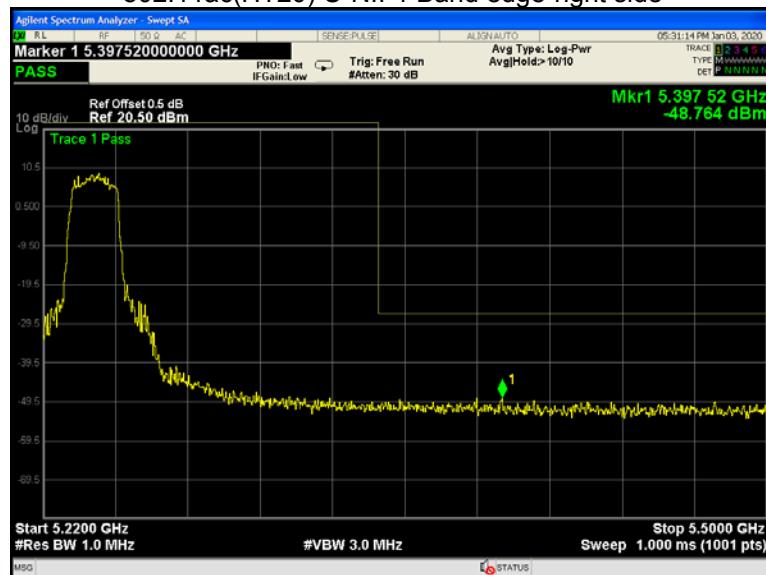
802.11n(HT40) U-NII-3 Band edge-right side



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



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



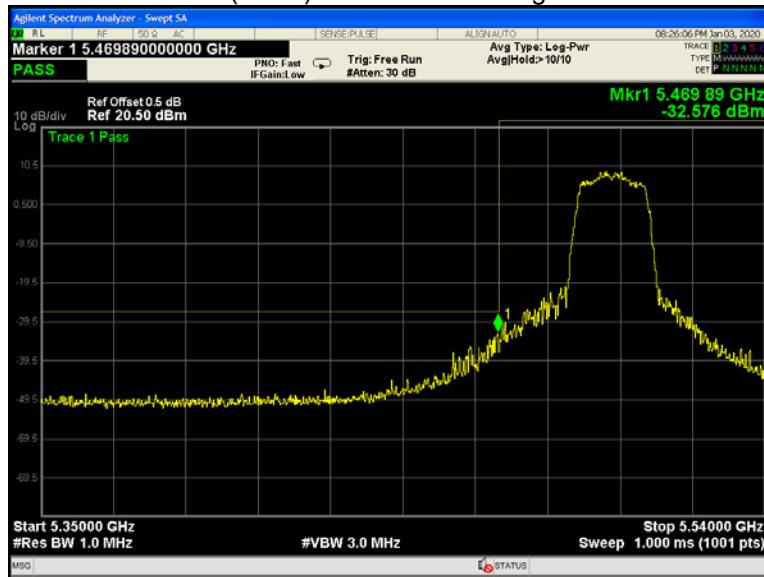
802.11ac(HT20) U-NII-2A Band edge-left side



802.11ac(HT20) U-NII-2A Band edge-right side



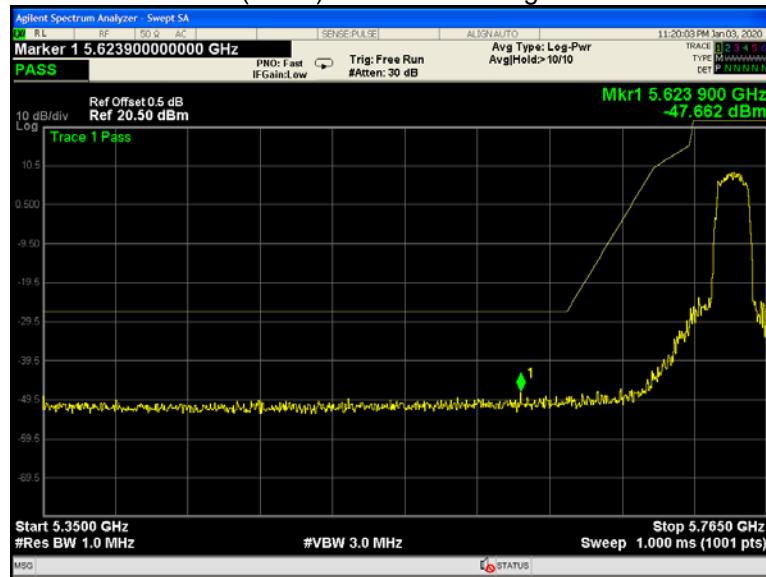
802.11ac(HT20) U-NII-2C Band edge-left side



802.11ac(HT20) U-NII-2C 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-2A Band edge-left side



802.11ac(HT40) U-NII-2A Band edge-right side



802.11ac(HT40) U-NII-2C Band edge-left side



802.11ac(HT40) U-NII-2C 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



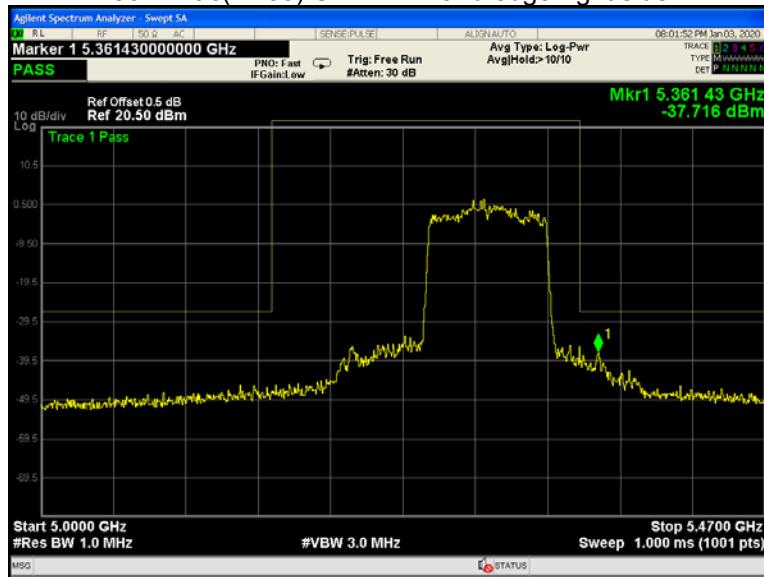
802.11ac(HT80) U-NII-1 Band edge-right side



802.11ac(HT80) U-NII-2A Band edge-left side



802.11ac(HT80) U-NII-2A Band edge-right side



802.11ac(HT80) U-NII-2C Band edge-left side



802.11ac(HT80) U-NII-2C 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) KDB662911 D01 Multiple Transmitter Output v02r01
Test Method:	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:

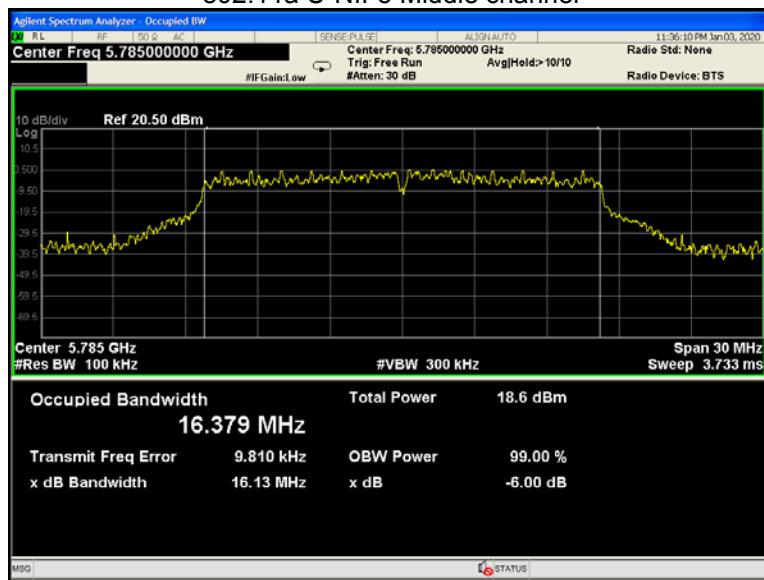
Band	Operation mode	6 dB Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.28	16.13	16.26
	802.11n(HT20)	17.69	17.65	17.59
	802.11n(HT40)	36.35	/	36.40
	802.11ac(HT20)	17.53	17.66	17.61
	802.11ac(HT40)	36.01	/	36.16
	802.11ac(HT80)	76.05	/	/

Test result plots shown as follows:

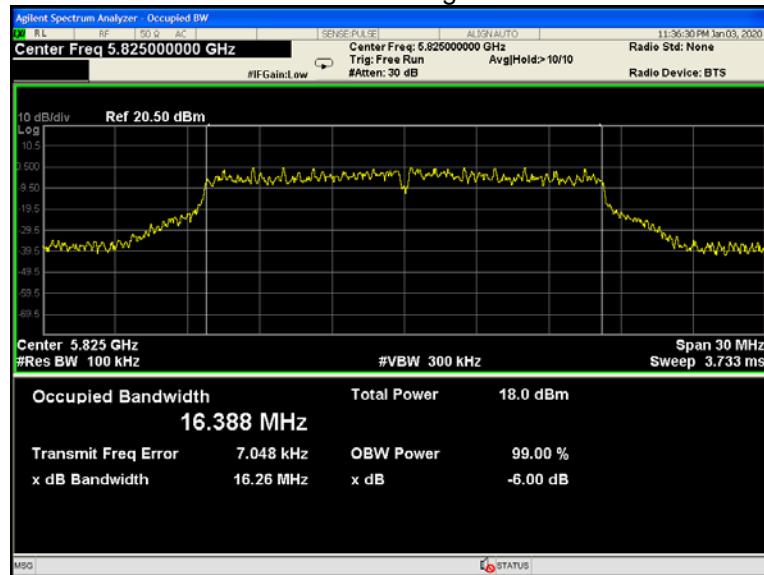
802.11a U-NII-3 Low channel



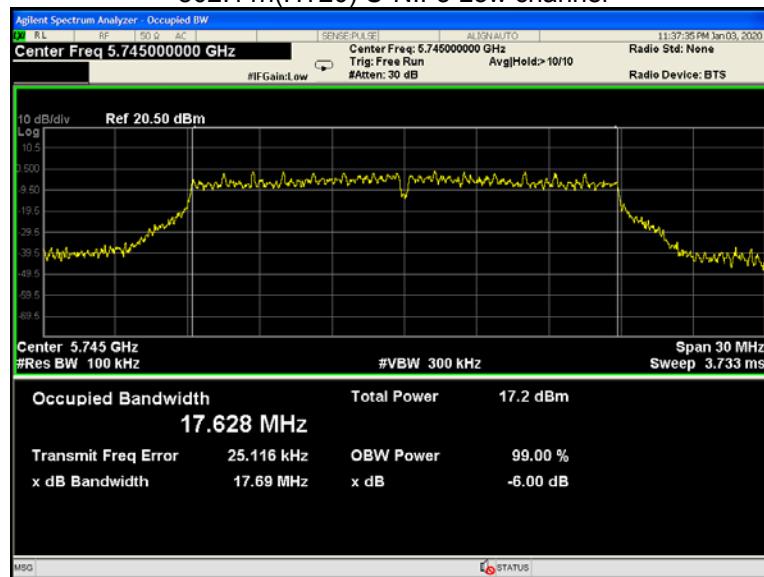
802.11a U-NII-3 Middle channel



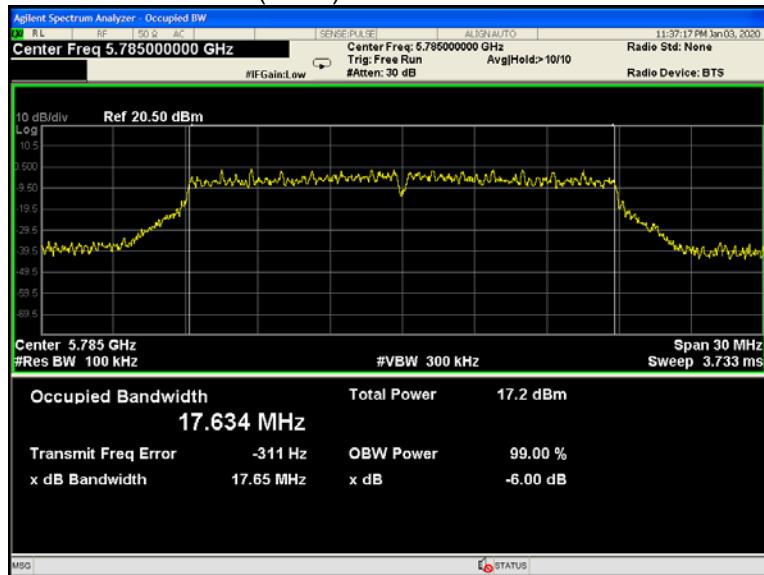
802.11a U-NII-3 High channel



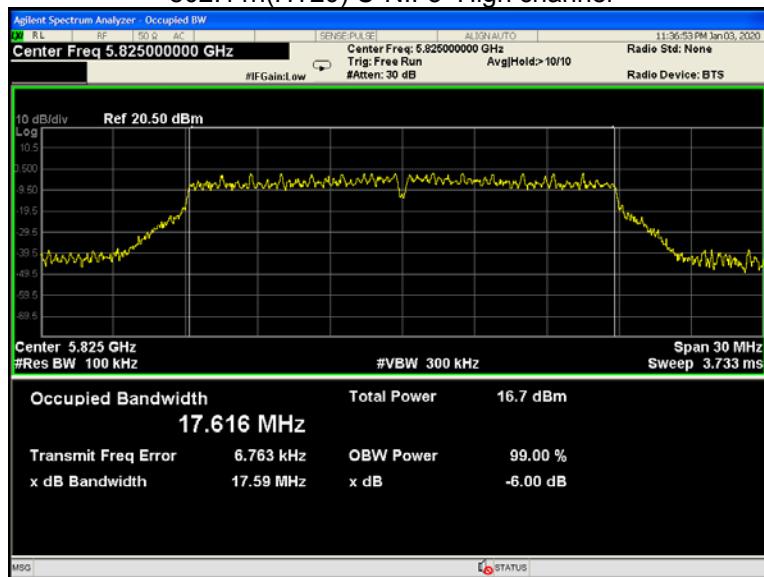
802.11n(HT20) U-NII-3 Low channel



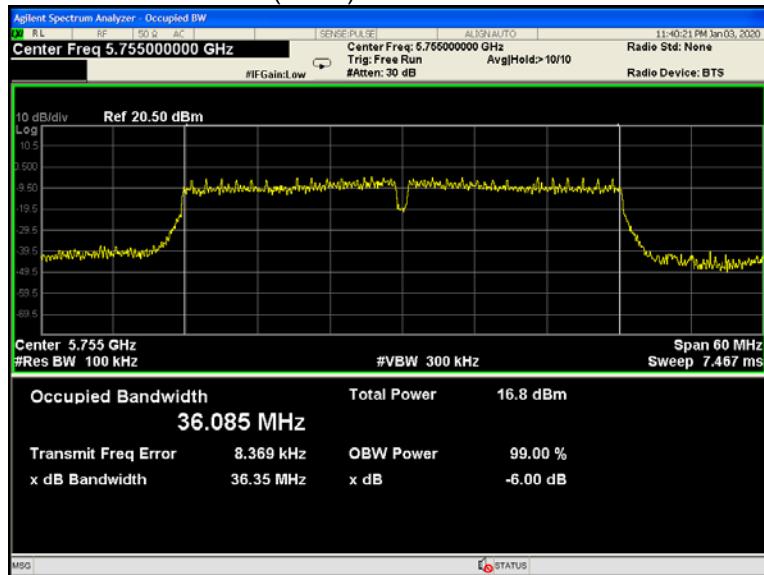
802.11n(HT20) U-NII-3 Middle channel



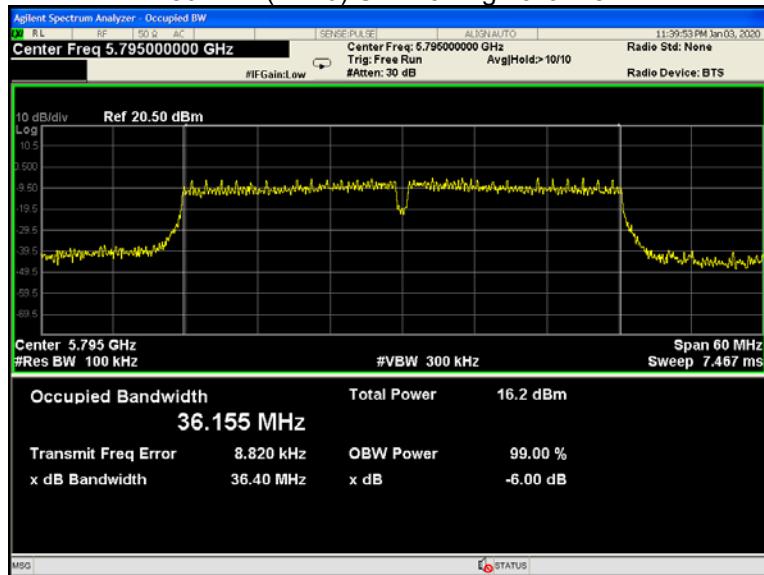
802.11n(HT20) U-NII-3 High channel



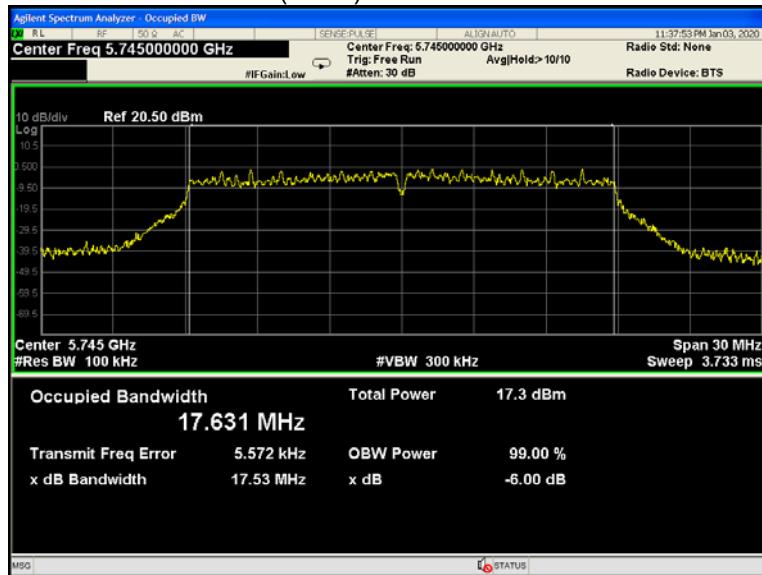
802.11n(HT40) U-NII-3 Low channel



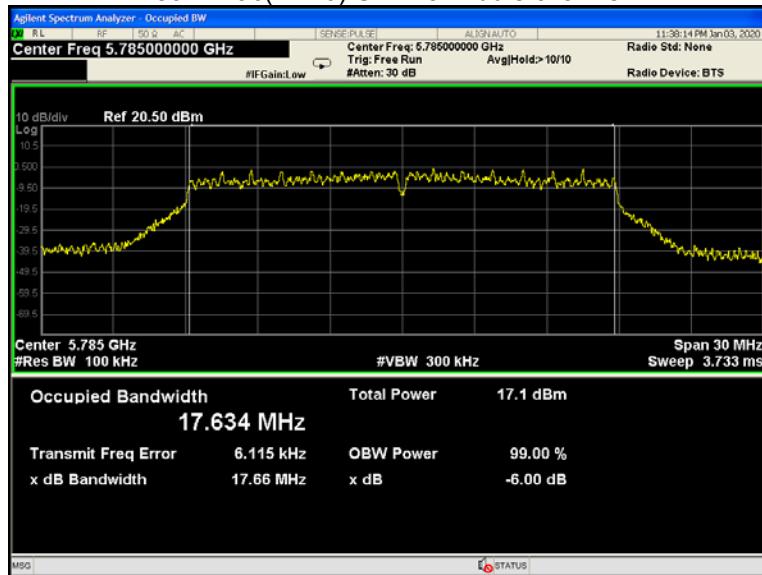
802.11n(HT40) U-NII-3 High channel



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



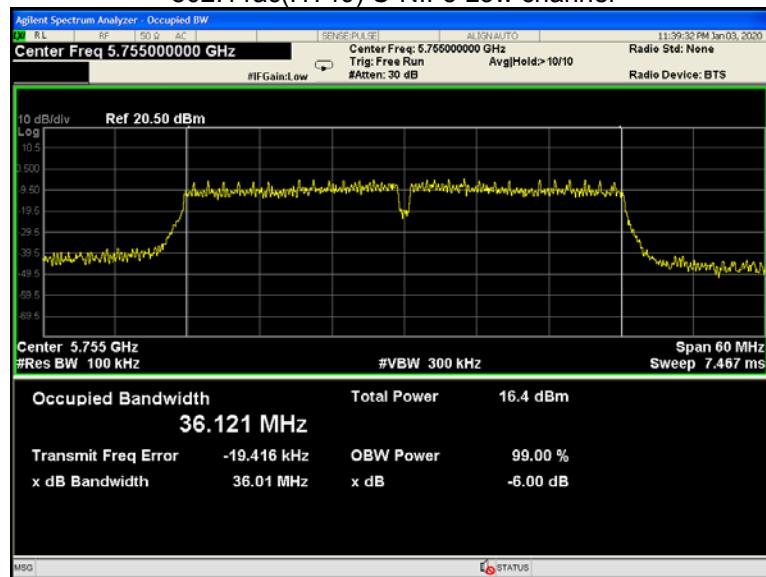
802.11ac(HT20) U-NII-3 Middle channel



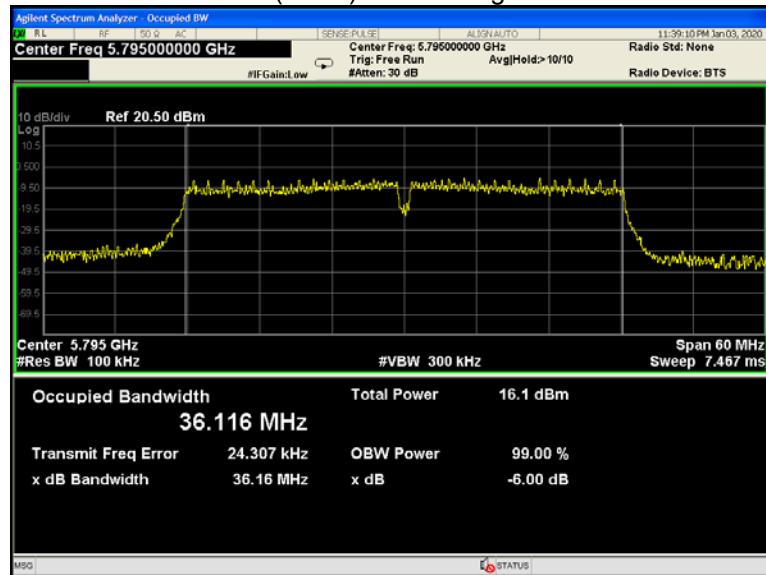
802.11ac(HT20) U-NII-3 High channel



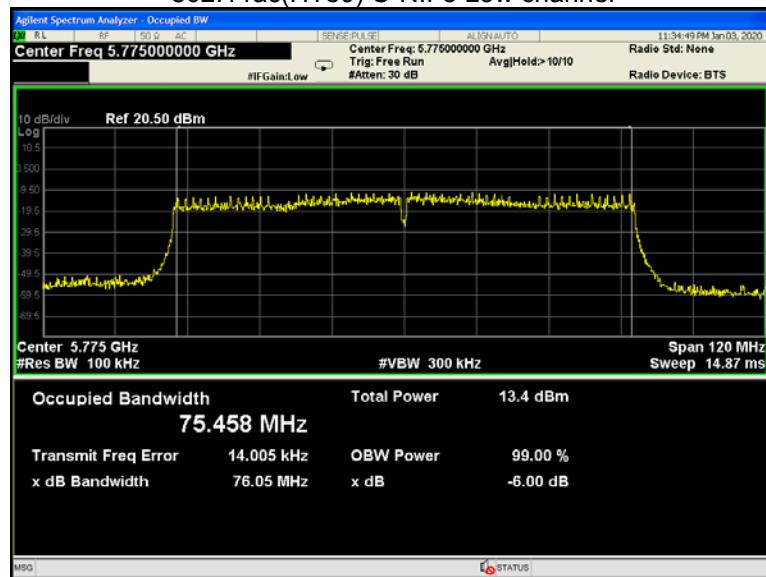
802.11ac(HT40) U-NII-3 Low channel



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



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



12 26 dB Bandwidth and 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.407 (a) KDB662911 D01 Multiple Transmitter Output v02r01
Test Method:	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	20.90	21.37	20.79	16.478	16.489	16.471
	802.11n(HT20)	21.07	21.07	21.05	17.676	17.711	17.748
	802.11n(HT40)	39.12	/	39.20	36.178	/	36.132
	802.11ac(HT20)	21.06	21.21	21.35	17.751	17.722	17.753
	802.11ac(HT40)	39.98	/	42.92	36.394	/	36.354
	802.11ac(HT80)	80.02	/	/	75.590	/	/

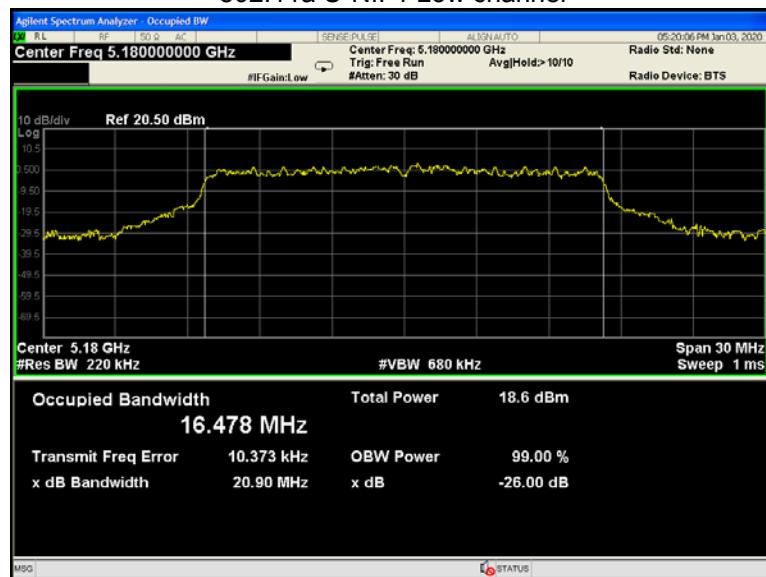
Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2A	802.11a	20.64	20.57	20.67	16.443	16.457	16.467
	802.11n(HT20)	21.17	21.12	20.97	17.726	17.735	17.679
	802.11n(HT40)	39.24	/	39.14	36.192	/	36.180
	802.11ac(HT20)	21.01	21.15	21.14	17.738	17.687	17.731
	802.11ac(HT40)	39.93	/	40.11	36.406	/	36.348
	802.11ac(HT80)	80.28	/	/	75.634	/	/

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2C	802.11a	20.58	20.48	20.43	16.463	16.492	16.485
	802.11n(HT20)	20.93	20.91	21.01	17.686	17.690	17.721
	802.11n(HT40)	39.15	38.99	38.97	36.199	36.212	36.276
	802.11ac(HT20)	20.91	21.25	21.55	17.749	17.689	17.753
	802.11ac(HT40)	40.04	39.83	40.20	36.431	36.374	36.469
	802.11ac(HT80)	80.30	/	80.00	75.610	/	75.869

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-3	802.11a	20.52	20.44	20.46	16.472	16.481	16.461
	802.11n(HT20)	20.93	21.14	20.76	17.675	17.723	17.686
	802.11n(HT40)	39.19	/	39.51	36.182	/	36.227
	802.11ac(HT20)	20.97	21.27	21.21	17.730	17.739	17.734
	802.11ac(HT40)	39.85	/	40.18	36.428	/	36.399
	802.11ac(HT80)	80.93	/	/	75.541	/	/

Test result plots shown as follows:

802.11a U-NII-1 Low channel



802.11a U-NII-1 Middle channel

