

TEST REPORT

Reference No. : WTD22D03053479W005
FCC ID..... : 2AEPIBLACKX
Applicant..... : COLOMBIANA DE COMERCIO S.A.
Address : Car. 43E No 8-71, Medellin, Colombia
Manufacturer : COOSEA GROUP (HK) COMPANY LIMITED LIMITED
Address : UNIT 5-6,16F.,MULTIFIELD PLAZA 3-7A PRAT AVENUE TSIM SHA
TSUI KL, HONG KONG
Product Name : CELLPHONE
Model No. : Black X
Brand..... : Kalley
Standards..... : FCC CFR 47 Part 15 C Section 15.407
Date of Receipt sample..... : 2022-03-25
Date of Test..... : 2022-03-25 to 2022-04-19
Date of Issue : 2022-05-30
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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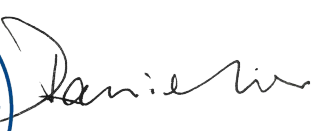
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3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD22D03053 479W005	2022-03-25	2022-03-25 to 2022-04-19	2022-05-30	original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	CELLPHONE
Model(s):	Black X
Model Description:	N/A
GSM Band(s):	GSM 850/900/1800/1900MHz
GPRS/EGPRS Class:	12
WCDMA Band(s):	FDD Band II/V
LTE Band(s):	FDD Band 4/7
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 v5.0 with BLE
GPS:	Support
NFC:	N/A
Hardware Version:	KF8F01
Software Version:	Kalley_BLACK_X_V01_20220401
Highest frequency (Exclude Radio):	1.8GHz
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: 14.50dBm U-NII-2A: 14.47dBm U-NII-2C: 14.12dBm U-NII-3: 13.97dBm
Type of Modulation:	OFDM
Antenna installation:	internal permanent antenna

Antenna Gain: 0.8dBi

Ratings: Battery DC 3.87V, 4900mAh
DC 5.0V==3.0A 15.0W charging from adapter
(Adapter Input: 100-240V~50/60Hz 0.50A)

Adapter: Manufacturer: Guangdong Beicom Electronics Co.,Ltd
Model No.: UF22F1A050300

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 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	2021-07-30	2022-07-29
2.	LISN	R&S	ENV216	101215	2021-07-30	2022-07-29
3.	Cable	Top	TYPE16(3.5M)	-	2021-07-30	2022-07-29
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	2021-07-30	2022-07-29
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	2021-07-30	2022-07-29
3.	Limiter	York	MTS-IMP-136	261115-001-0024	2021-07-30	2022-07-29
4.	Cable	LARGE	RF300	-	2021-07-30	2022-07-29
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	2021-04-20	2022-04-19
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	2021-04-20	2022-04-19
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2021-08-22	2022-08-21
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2021-04-20	2022-04-19
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2021-04-20	2022-04-19
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2021-04-20	2022-04-19
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2021-04-20	2022-04-19
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	2021-04-20	2022-04-19
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	2021-04-20	2022-04-19
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2021-04-25	2022-04-24
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	2021-04-20	2022-04-19
4	Cable	HUBER+SUHNER	CBL2	525178	2021-04-20	2022-04-19
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	2021-04-20	2022-04-19
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2021-04-20	2022-04-19
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	2021-04-20	2022-04-19

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 :

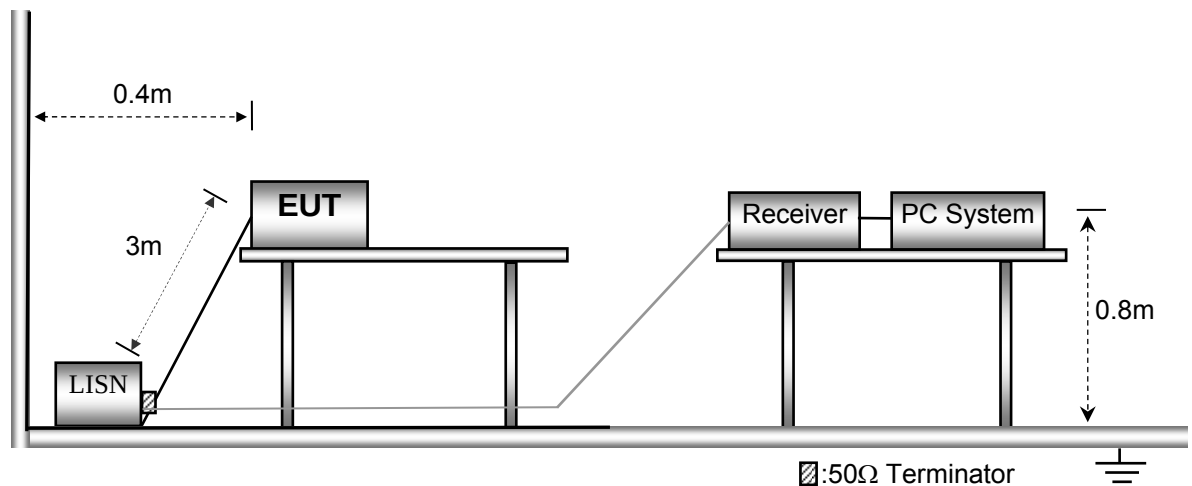
Temperature:	21.5 °C
Humidity:	51.9 % RH
Atmospheric Pressure:	101.2kPa

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.



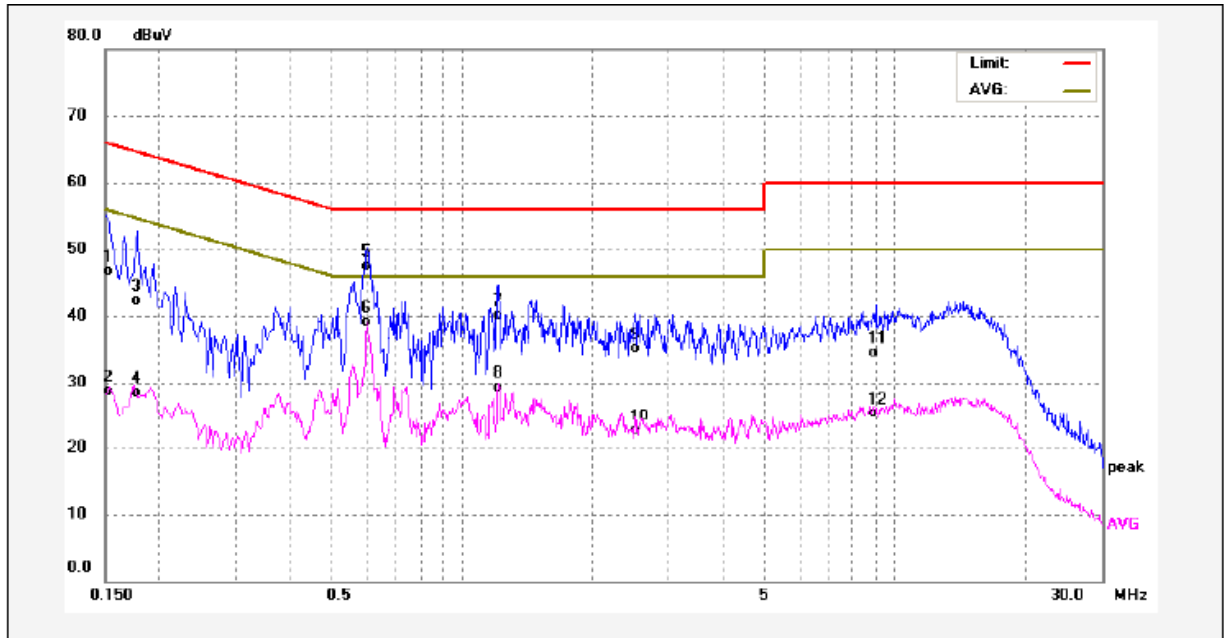
7.3 Measurement Description

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

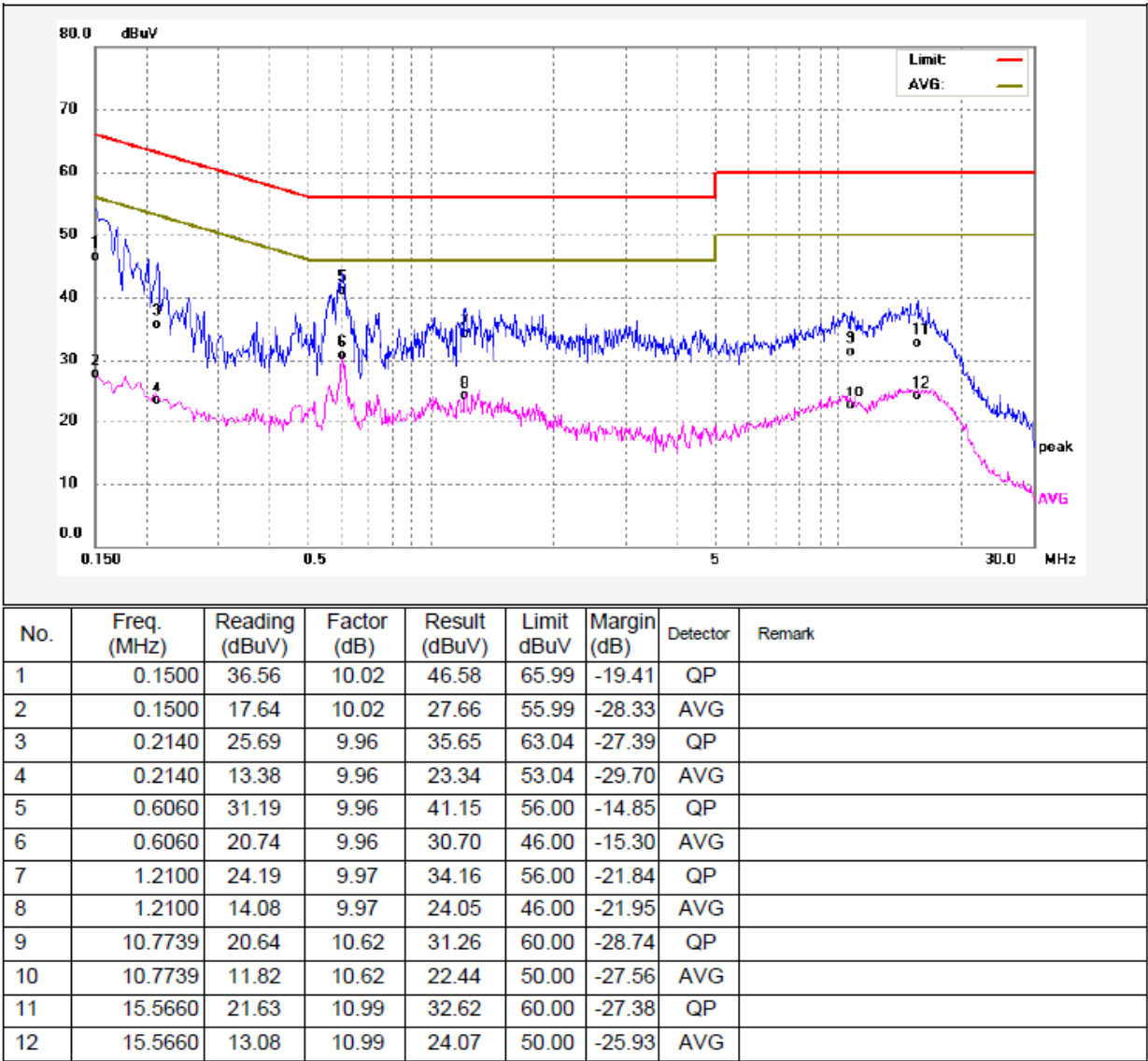
An initial pre-scan was performed on the live and neutral lines.

Live line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	36.76	9.94	46.70	65.99	-19.29	QP	
2	0.1500	18.86	9.94	28.80	55.99	-27.19	AVG	
3	0.1780	32.31	9.90	42.21	64.57	-22.36	QP	
4	0.1780	18.66	9.90	28.56	54.57	-26.01	AVG	
5	0.6020	37.59	9.88	47.47	56.00	-8.53	QP	
6	0.6020	29.18	9.88	39.06	46.00	-6.94	AVG	
7	1.2100	30.13	9.89	40.02	56.00	-15.98	QP	
8	1.2100	19.47	9.89	29.36	46.00	-16.64	AVG	
9	2.5059	25.13	9.94	35.07	56.00	-20.93	QP	
10	2.5059	12.73	9.94	22.67	46.00	-23.33	AVG	
11	8.9819	24.23	10.27	34.50	60.00	-25.50	QP	
12	8.9819	15.00	10.27	25.27	50.00	-24.73	AVG	

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	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
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

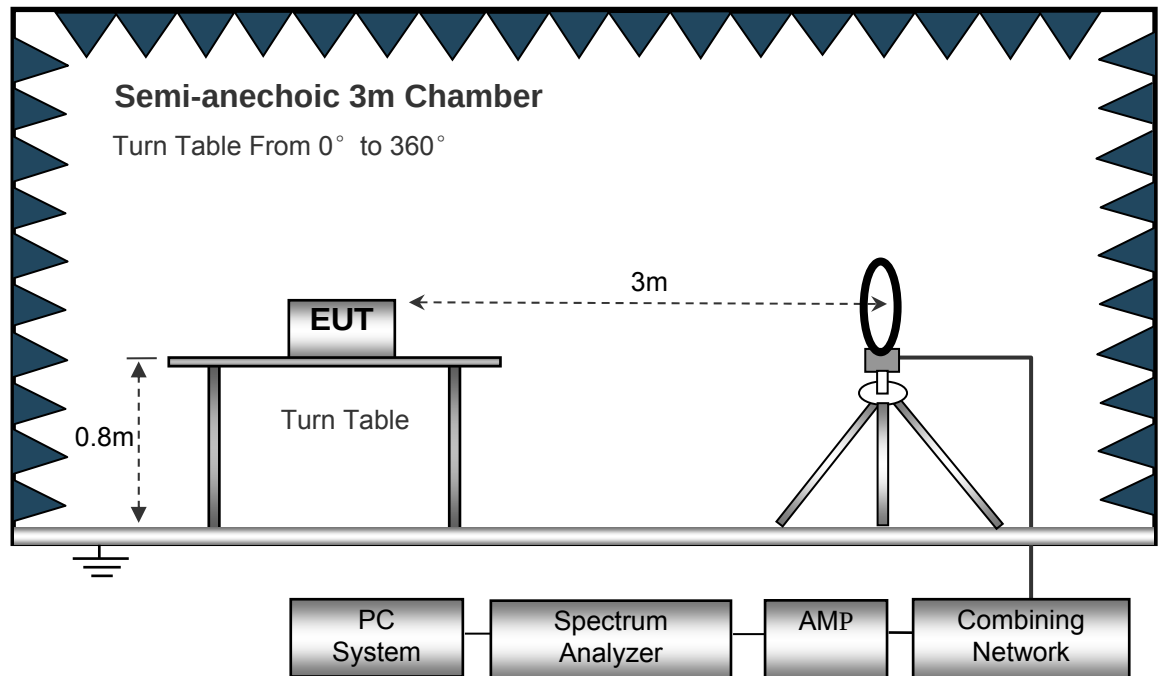
EUT Operation :

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

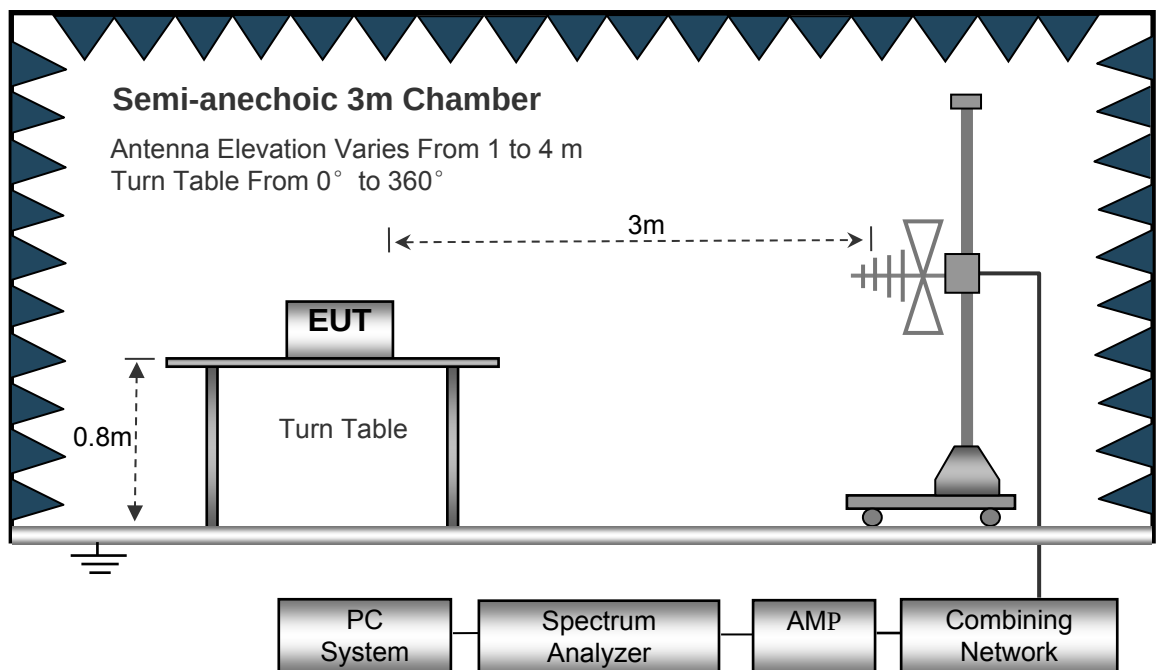
8.2 Test Setup

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

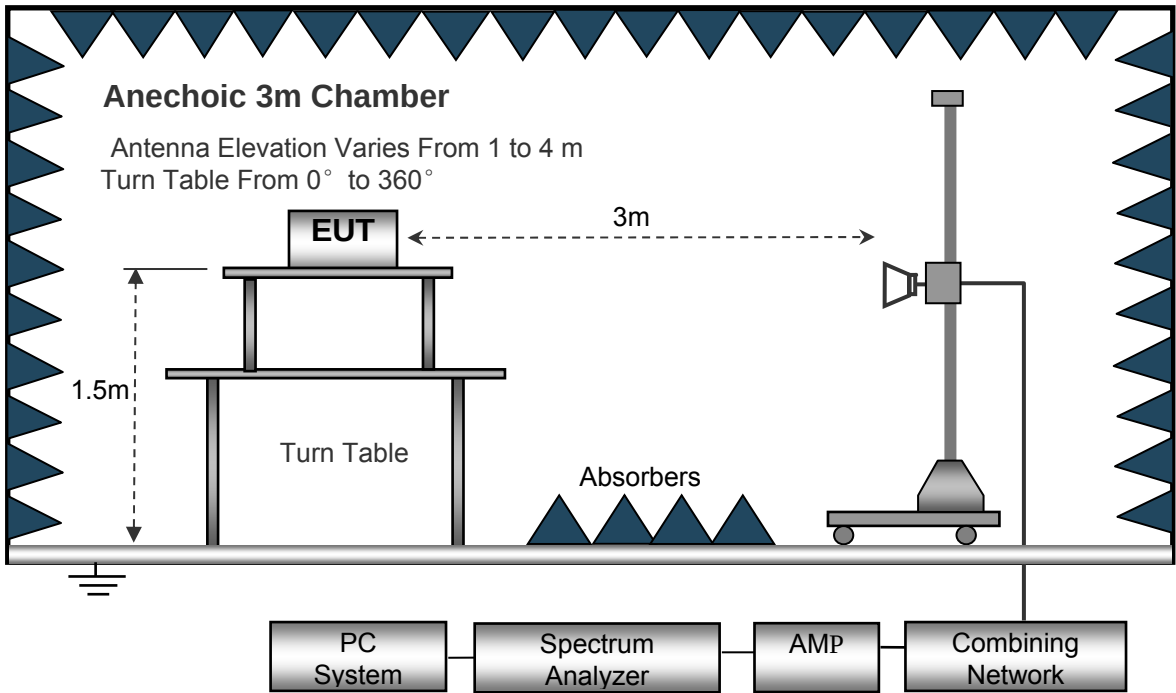
The test setup for emission measurement below 30MHz.



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
DetectorPK
Resolution Bandwidth.....100kHz
Video Bandwidth.....300kHz

Above 1GHz

Sweep Speed Auto
DetectorPK
Resolution Bandwidth.....1MHz
Video Bandwidth.....3MHz
DetectorAve.
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	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
(MHz)	Measurement results	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
U-NII-1:802.11a 5180MHz							
6.021	25.10	QP	21.84	40.00	6.94	29.54	-22.60
15.730	24.63	QP	21.35	40.00	5.98	29.54	-23.56
25.680	24.78	QP	20.67	40.00	5.45	29.54	-24.09
U-NII-1:802.11n20 5180MHz							
6.021	23.66	QP	21.84	40.00	5.50	29.54	-24.04
15.730	24.89	QP	21.35	40.00	6.24	29.54	-23.30
25.680	25.11	QP	20.67	40.00	5.78	29.54	-23.76
U-NII-1:802.11ac 20 5180MHz							
6.021	24.51	QP	21.84	40.00	6.35	29.54	-23.19
15.730	25.46	QP	21.35	40.00	6.81	29.54	-22.73
25.680	25.09	QP	20.67	40.00	5.76	29.54	-23.78
U-NII-1:802.11n40 5190MHz							
6.021	23.58	QP	21.84	40.00	5.42	29.54	-24.12
15.730	24.59	QP	21.35	40.00	5.94	29.54	-23.60
25.680	25.04	QP	20.67	40.00	5.71	29.54	-23.83
U-NII-1:802.11ac40 5190MHz							
6.021	24.32	QP	21.84	40.00	6.16	29.54	-23.38
15.730	25.14	QP	21.35	40.00	6.49	29.54	-23.05
25.680	24.87	QP	20.67	40.00	5.54	29.54	-24.00
U-NII-1:802.11ac80 5210MHz							
6.021	25.06	QP	21.84	40.00	6.90	29.54	-22.64
15.730	24.79	QP	21.35	40.00	6.14	29.54	-23.40
25.680	24.54	QP	20.67	40.00	5.21	29.54	-24.33

Frequency	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
(MHz)	Measurement results	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
U-NII-2A:802.11a 5260MHz							
6.021	24.51	QP	21.84	40.00	6.35	29.54	-23.19
15.730	25.33	QP	21.35	40.00	6.68	29.54	-22.86
25.680	24.82	QP	20.67	40.00	5.49	29.54	-24.05
U-NII-2A:802.11n20 5260MHz							
6.021	24.06	QP	21.84	40.00	5.90	29.54	-23.64
15.730	25.67	QP	21.35	40.00	7.02	29.54	-22.52
25.680	24.12	QP	20.67	40.00	4.79	29.54	-24.75
U-NII-2A:802.11ac 5260MHz							
6.021	23.14	QP	21.84	40.00	4.98	29.54	-24.56
15.730	24.33	QP	21.35	40.00	5.68	29.54	-23.86
25.680	24.92	QP	20.67	40.00	5.59	29.54	-23.95
U-NII-2A:802.11n40 5270MHz							
6.021	25.16	QP	21.84	40.00	7.00	29.54	-22.54
15.730	24.82	QP	21.35	40.00	6.17	29.54	-23.37
25.680	25.49	QP	20.67	40.00	6.16	29.54	-23.38
U-NII-2A:802.11ac40 5270MHz							
6.021	24.71	QP	21.84	40.00	6.55	29.54	-22.99
15.730	25.66	QP	21.35	40.00	7.01	29.54	-22.53
25.680	24.85	QP	20.67	40.00	5.52	29.54	-24.02
U-NII-2A:802.11ac80 5290MHz							
6.021	25.02	QP	21.84	40.00	6.86	29.54	-22.68
15.730	25.91	QP	21.35	40.00	7.26	29.54	-22.28
25.680	24.99	QP	20.67	40.00	5.66	29.54	-23.88

Frequency	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
(MHz)	Measurement results	Detector	Correct factor	Extrapolation factor	Measurement results (calculated)	Limits	Margin
U-NII-2C:802.11a 5500MHz							
6.021	25.10	QP	21.84	40.00	6.94	29.54	-22.60
15.730	24.15	QP	21.35	40.00	5.50	29.54	-24.04
25.680	24.33	QP	20.67	40.00	5.00	29.54	-24.54
U-NII-2C:802.11n20 5500MHz							
6.021	24.35	QP	21.84	40.00	6.19	29.54	-23.35
15.730	24.18	QP	21.35	40.00	5.53	29.54	-24.01
25.680	25.63	QP	20.67	40.00	6.30	29.54	-23.24
U-NII-2C:802.11ac20 5500MHz							
6.021	24.69	QP	21.84	40.00	6.53	29.54	-23.01
15.730	25.73	QP	21.35	40.00	7.08	29.54	-22.46
25.680	24.38	QP	20.67	40.00	5.05	29.54	-24.49
U-NII-2C:802.11n40 5510MHz							
6.021	24.66	QP	21.84	40.00	6.50	29.54	-23.04
15.730	25.19	QP	21.35	40.00	6.54	29.54	-23.00
25.680	24.53	QP	20.67	40.00	5.20	29.54	-24.34
U-NII-2C:802.11ac40 5510MHz							
6.021	24.57	QP	21.84	40.00	6.41	29.54	-23.13
15.730	25.19	QP	21.35	40.00	6.54	29.54	-23.00
25.680	24.34	QP	20.67	40.00	5.01	29.54	-24.53
U-NII-2C:802.11ac80 5530MHz							
6.021	25.70	QP	21.84	40.00	7.54	29.54	-22.00
15.730	25.68	QP	21.35	40.00	7.03	29.54	-22.51
25.680	24.21	QP	20.67	40.00	4.88	29.54	-24.66

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							
6.021	24.71	QP	21.84	40.00	6.55	29.54	-22.99
15.730	25.06	QP	21.35	40.00	6.41	29.54	-23.13
25.680	24.88	QP	20.67	40.00	5.55	29.54	-23.99
U-NII-3 802.11n20 5745MHz							
6.021	24.31	QP	21.84	40.00	6.15	29.54	-23.39
15.730	25.08	QP	21.35	40.00	6.43	29.54	-23.11
25.680	24.76	QP	20.67	40.00	5.43	29.54	-24.11
U-NII-3 802.11ac 5745MHz							
6.021	24.05	QP	21.84	40.00	5.89	29.54	-23.65
15.730	25.68	QP	21.35	40.00	7.03	29.54	-22.51
25.680	24.87	QP	20.67	40.00	5.54	29.54	-24.00
U-NII-3 802.11n40 5755MHz							
6.021	24.55	QP	21.84	40.00	6.39	29.54	-23.15
15.730	25.10	QP	21.35	40.00	6.45	29.54	-23.09
25.680	24.72	QP	20.67	40.00	5.39	29.54	-24.15
U-NII-3 802.11ac40 5755MHz							
6.021	24.16	QP	21.84	40.00	6.00	29.54	-23.54
15.730	25.08	QP	21.35	40.00	6.43	29.54	-23.11
25.680	24.19	QP	20.67	40.00	4.86	29.54	-24.68
U-NII-3 802.11ac80 5775MHz							
6.021	24.05	QP	21.84	40.00	5.89	29.54	-23.65
15.730	25.33	QP	21.35	40.00	6.68	29.54	-22.86
25.680	24.07	QP	20.67	40.00	4.74	29.54	-24.80

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	40.56	QP	220	1.6	H	-11.62	28.94	46.00	-17.06
223.45	37.03	QP	173	1.0	V	-11.62	25.41	46.00	-20.59
4510.47	51.55	PK	238	1.7	H	-2.03	49.52	74.00	-24.48
4510.47	45.84	Ave	238	1.7	H	-2.03	43.81	54.00	-10.19
5140.03	52.55	PK	121	1.3	H	-1.02	51.53	74.00	-22.47
5140.03	47.68	Ave	121	1.3	H	-1.02	46.66	54.00	-7.34
10360.00	41.24	PK	117	1.1	H	5.33	46.57	74.00	-27.43
10360.00	35.38	Ave	117	1.1	H	5.33	40.71	54.00	-13.29
802.11a U-NII-1 Middle channel 5200MHz									
223.45	41.82	QP	180	2.0	H	-11.62	30.20	46.00	-15.80
223.45	35.90	QP	91	1.7	V	-11.62	24.28	46.00	-21.72
4524.13	51.25	PK	74	1.6	H	-1.94	49.31	74.00	-24.69
4524.13	45.54	Ave	74	1.6	H	-1.94	43.60	54.00	-10.40
5123.72	54.16	PK	76	1.7	H	-1.06	53.10	74.00	-20.90
5123.72	49.01	Ave	76	1.7	H	-1.06	47.95	54.00	-6.05
10400.00	39.98	PK	243	2.0	H	5.21	45.19	74.00	-28.81
10400.00	36.06	Ave	243	2.0	H	5.21	41.27	54.00	-12.73

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	42.45	QP	52	1.3	H	-11.62	30.83	46.00	-15.17
223.45	35.94	QP	167	1.9	V	-11.62	24.32	46.00	-21.68
4504.44	51.16	PK	253	1.4	H	-2.24	48.92	74.00	-25.08
4504.44	45.91	Ave	253	1.4	H	-2.24	43.67	54.00	-10.33
5140.57	53.70	PK	338	1.5	H	-1.09	52.61	74.00	-21.39
5140.57	48.45	Ave	338	1.5	H	-1.09	47.36	54.00	-6.64
10480.00	40.46	PK	219	2.0	H	5.14	45.60	74.00	-28.40
10480.00	34.58	Ave	219	2.0	H	5.14	39.72	54.00	-14.28
802.11a U-NII-2A Low Channel 5260MHz									
223.45	41.05	QP	52	1.2	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	159	1.6	V	-11.62	24.64	46.00	-21.36
4508.18	50.44	PK	244	1.2	H	-2.03	48.41	74.00	-25.59
4508.18	46.32	Ave	244	1.2	H	-2.03	44.29	54.00	-9.71
5111.11	52.53	PK	170	2.0	H	-1.02	51.51	74.00	-22.49
5111.11	48.18	Ave	170	2.0	H	-1.02	47.16	54.00	-6.84
10520.00	41.08	PK	81	1.5	H	5.33	46.41	74.00	-27.59
10520.00	36.85	Ave	81	1.5	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)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-2A middle channel 5280MHz									
223.45	41.06	QP	0	1.7	H	-11.62	29.44	46.00	-16.56
223.45	37.03	QP	221	1.3	V	-11.62	25.41	46.00	-20.59
4515.45	51.79	PK	305	1.9	H	-1.94	49.85	74.00	-24.15
4515.45	45.53	Ave	305	1.9	H	-1.94	43.59	54.00	-10.41
5137.30	52.96	PK	27	1.9	H	-1.06	51.90	74.00	-22.10
5137.30	48.25	Ave	27	1.9	H	-1.06	47.19	54.00	-6.81
10560.00	41.48	PK	33	1.3	H	5.21	46.69	74.00	-27.31
10560.00	37.92	Ave	33	1.3	H	5.21	43.13	54.00	-10.87
802.11a U-NII-2A High channel 5320MHz									
223.45	41.76	QP	92	1.4	H	-11.62	30.14	46.00	-15.86
223.45	37.65	QP	305	1.8	V	-11.62	26.03	46.00	-19.97
4511.32	51.60	PK	255	1.7	H	-2.24	49.36	74.00	-24.64
4511.32	44.72	Ave	255	1.7	H	-2.24	42.48	54.00	-11.52
5131.63	54.64	PK	144	1.9	H	-1.09	53.55	74.00	-20.45
5131.63	48.58	Ave	144	1.9	H	-1.09	47.49	54.00	-6.51
10640.00	41.91	PK	162	1.3	H	5.14	47.05	68.20	-21.15
10640.00	37.08	Ave	162	1.3	H	5.14	42.22	54.00	-11.78

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)
802.11a U-NII-2C Low Channel 5500MHz									
223.45	41.05	QP	87	1.1	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	333	1.6	V	-11.62	24.64	46.00	-21.36
4501.39	50.44	PK	248	1.6	H	-2.03	48.41	74.00	-25.59
4501.39	46.32	Ave	248	1.6	H	-2.03	44.29	54.00	-9.71
5122.47	52.53	PK	174	1.2	H	-1.02	51.51	74.00	-22.49
5122.47	48.18	Ave	174	1.2	H	-1.02	47.16	54.00	-6.84
11000.00	41.08	PK	29	1.4	H	5.33	46.41	68.20	-21.79
11000.00	36.85	Ave	29	1.4	H	5.33	42.18	54.00	-11.82
802.11a U-NII-2C Middle channel 5600MHz									
223.45	42.11	QP	271	1.3	H	-11.62	30.49	46.00	-15.51
223.45	35.70	QP	329	1.7	V	-11.62	24.08	46.00	-21.92
4514.27	49.37	PK	304	2.0	H	-1.94	47.43	74.00	-26.57
4514.27	47.38	Ave	304	2.0	H	-1.94	45.44	54.00	-8.56
5133.39	53.60	PK	279	1.1	H	-1.06	52.54	74.00	-21.46
5133.39	47.49	Ave	279	1.1	H	-1.06	46.43	54.00	-7.57
11200.00	41.96	PK	190	2.0	H	5.21	47.17	68.20	-21.03
11200.00	38.11	Ave	190	2.0	H	5.21	43.32	54.00	-10.68

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 High channel 5700MHz									
223.45	41.54	QP	266	1.1	H	-11.62	29.92	46.00	-16.08
223.45	34.87	QP	277	1.9	V	-11.62	23.25	46.00	-22.75
4518.59	49.20	PK	22	1.7	H	-2.24	46.96	74.00	-27.04
4518.59	47.80	Ave	22	1.7	H	-2.24	45.56	54.00	-8.44
5125.04	53.15	PK	237	1.2	H	-1.09	52.06	74.00	-21.94
5125.04	48.70	Ave	237	1.2	H	-1.09	47.61	54.00	-6.39
11400.00	42.02	PK	274	1.2	H	5.14	47.16	68.20	-21.04
11400.00	35.38	Ave	274	1.2	H	5.14	40.52	54.00	-13.48
802.11a U-NII-3 Low Channel 5745MHz									
223.45	42.67	QP	164	2.0	H	-11.62	31.05	46.00	-14.95
223.45	37.16	QP	163	1.1	V	-11.62	25.54	46.00	-20.46
4537.40	51.06	PK	124	1.6	H	-2.06	49.00	74.00	-25.00
4537.40	46.64	Ave	124	1.6	H	-2.06	44.58	54.00	-9.42
11490.00	40.65	PK	228	1.3	H	5.93	46.58	68.20	-21.62
11490.00	34.11	Ave	228	1.3	H	5.93	40.04	54.00	-13.96
5373.58	45.44	PK	341	1.8	H	-1.25	44.19	74.00	-29.81
5373.58	37.33	Ave	341	1.8	H	-1.25	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)
802.11a U-NII-3 middle channel 5785MHz									
223.45	43.94	QP	283	1.9	H	-11.62	32.32	46.00	-13.68
223.45	36.78	QP	261	2.0	V	-11.62	25.16	46.00	-20.84
4516.37	51.18	PK	218	1.5	H	-2.03	49.15	74.00	-24.85
4516.37	46.83	Ave	218	1.5	H	-2.03	44.80	54.00	-9.20
11570.00	40.05	PK	302	1.9	H	5.81	45.86	68.20	-22.34
11570.00	34.24	Ave	302	1.9	H	5.81	40.05	54.00	-13.95
5362.08	46.57	PK	214	1.1	H	-1.22	45.35	74.00	-28.65
5362.08	37.06	Ave	214	1.1	H	-1.22	35.84	54.00	-18.16
802.11a U-NII-3 High channel 5825MHz									
223.45	43.44	QP	3	1.2	H	-11.62	31.82	46.00	-14.18
223.45	37.22	QP	249	1.2	V	-11.62	25.60	46.00	-20.40
4502.81	51.86	PK	216	1.8	H	-1.84	50.02	74.00	-23.98
4502.81	45.35	Ave	216	1.8	H	-1.84	43.51	54.00	-10.49
11650.00	39.77	PK	217	1.9	H	5.84	45.61	68.20	-22.59
11650.00	36.33	Ave	217	1.9	H	5.84	42.17	54.00	-11.83
5351.63	46.56	PK	304	1.9	H	-1.30	45.26	74.00	-28.74
5351.63	39.92	Ave	304	1.9	H	-1.30	38.62	54.00	-15.38

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	43.70	QP	66	1.9	H	-11.62	32.08	46.00	-13.92
223.45	37.52	QP	60	1.9	V	-11.62	25.90	46.00	-20.10
4517.02	50.78	PK	212	1.1	H	-2.14	48.64	74.00	-25.36
4517.02	45.66	Ave	212	1.1	H	-2.14	43.52	54.00	-10.48
5132.07	45.58	PK	60	1.8	H	-1.06	44.52	74.00	-29.48
5132.07	39.23	Ave	60	1.8	H	-1.06	38.17	54.00	-15.83
10360.00	40.53	PK	300	1.8	H	5.33	45.86	74.00	-28.14
10360.00	36.64	Ave	300	1.8	H	5.33	41.97	54.00	-12.03
802.11n(HT20) U-NII-1 Middle channel 5200MHz									
223.45	42.24	QP	13	2.0	H	-11.62	30.62	46.00	-15.38
223.45	38.71	QP	173	1.4	V	-11.62	27.09	46.00	-18.91
4515.51	49.73	PK	190	1.7	H	-2.12	47.61	74.00	-26.39
4515.51	45.08	Ave	190	1.7	H	-2.12	42.96	54.00	-11.04
5110.51	47.52	PK	58	1.9	H	-1.06	46.46	74.00	-27.54
5110.51	40.55	Ave	58	1.9	H	-1.06	39.49	54.00	-14.51
10400.00	40.58	PK	169	1.7	H	5.21	45.79	74.00	-28.21
10400.00	34.31	Ave	169	1.7	H	5.21	39.52	54.00	-14.48

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	43.71	QP	178	1.7	H	-11.62	32.09	46.00	-13.91
223.45	37.24	QP	247	1.8	V	-11.62	25.62	46.00	-20.38
4516.76	49.24	PK	243	2.0	H	-1.96	47.28	74.00	-26.72
4516.76	45.82	Ave	243	2.0	H	-1.96	43.86	54.00	-10.14
5114.44	49.18	PK	263	1.1	H	-1.06	48.12	74.00	-25.88
5114.44	42.38	Ave	263	1.1	H	-1.06	41.32	54.00	-12.68
10480.00	39.90	PK	359	1.1	H	5.14	45.04	74.00	-28.96
10480.00	36.77	Ave	359	1.1	H	5.14	41.91	54.00	-12.09
802.11n(HT20) U-NII-2A Low Channel 5260MHz									
223.45	43.22	QP	289	1.3	H	-11.62	31.60	46.00	-14.40
223.45	39.66	QP	169	1.8	V	-11.62	28.04	46.00	-17.96
4508.96	38.00	PK	100	1.1	H	-2.03	35.97	74.00	-38.03
4508.96	46.18	Ave	100	1.1	H	-2.03	44.15	54.00	-9.85
5149.12	40.30	PK	259	1.7	H	-1.02	39.28	74.00	-34.72
5149.12	0.54	Ave	259	1.7	H	-1.02	-0.48	54.00	-54.48
10520.00	42.45	PK	124	1.9	H	5.33	47.78	74.00	-26.22
10520.00	34.48	Ave	124	1.9	H	5.33	39.81	54.00	-14.19

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-2A middle channel 5280MHz									
223.45	42.02	QP	192	1.0	H	-11.62	30.40	46.00	-15.60
223.45	39.89	QP	245	1.1	V	-11.62	28.27	46.00	-17.73
4502.76	37.04	PK	225	2.0	H	-1.94	35.10	74.00	-38.90
4502.76	45.53	Ave	225	2.0	H	-1.94	43.59	54.00	-10.41
5133.20	41.59	PK	134	1.1	H	-1.06	40.53	74.00	-33.47
5133.20	1.16	Ave	134	1.1	H	-1.06	0.10	54.00	-53.90
10560.00	41.87	PK	220	1.9	H	5.21	47.08	74.00	-26.92
10560.00	33.70	Ave	220	1.9	H	5.21	38.91	54.00	-15.09
802.11n(HT20) U-NII-2A High channel 5320MHz									
223.45	41.88	QP	244	1.4	H	-11.62	30.26	46.00	-15.74
223.45	39.02	QP	297	1.0	V	-11.62	27.40	46.00	-18.60
4502.64	38.50	PK	6	1.6	H	-2.24	36.26	74.00	-37.74
4502.64	45.89	Ave	6	1.6	H	-2.24	43.65	54.00	-10.35
5135.69	43.19	PK	27	1.1	H	-1.09	42.10	74.00	-31.90
5135.69	0.88	Ave	27	1.1	H	-1.09	-0.21	54.00	-54.21
10640.00	43.31	PK	49	1.7	H	5.14	48.45	68.20	-19.75
10640.00	35.76	Ave	49	1.7	H	5.14	40.90	54.00	-13.10

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	43.84	QP	78	1.0	H	-11.62	32.22	46.00	-13.78
223.45	-0.43	QP	145	1.1	V	-11.62	-12.05	46.00	-58.05
4524.36	43.02	PK	356	1.7	H	-2.03	40.99	74.00	-33.01
4524.36	35.56	Ave	356	1.7	H	-2.03	33.53	54.00	-20.47
5133.67	48.06	PK	155	1.6	H	-1.02	47.04	74.00	-26.96
5133.67	39.09	Ave	155	1.6	H	-1.02	38.07	54.00	-15.93
11000.00	-1.05	PK	191	1.1	H	5.33	4.28	68.20	-63.92
11000.00	43.12	Ave	191	1.1	H	5.33	48.45	54.00	-5.55
802.11n(HT20) U-NII-2C Middle channel 5600MHz									
223.45	43.91	QP	196	1.4	H	-11.62	32.29	46.00	-13.71
223.45	-0.45	QP	262	1.1	V	-11.62	-12.07	46.00	-58.07
4534.63	43.32	PK	269	1.1	H	-1.94	41.38	74.00	-32.62
4534.63	36.11	Ave	269	1.1	H	-1.94	34.17	54.00	-19.83
5143.79	49.73	PK	179	2.0	H	-1.06	48.67	74.00	-25.33
5143.79	38.96	Ave	179	2.0	H	-1.06	37.90	54.00	-16.10
11200.00	-2.20	PK	336	1.5	H	5.21	3.01	68.20	-65.19
11200.00	44.39	Ave	336	1.5	H	5.21	49.60	54.00	-4.40

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 High channel 5700MHz									
223.45	42.81	QP	269	1.2	H	-11.62	31.19	46.00	-14.81
223.45	-0.30	QP	251	2.0	V	-11.62	-11.92	46.00	-57.92
4538.13	41.87	PK	79	1.9	H	-2.24	39.63	74.00	-34.37
4538.13	34.82	Ave	79	1.9	H	-2.24	32.58	54.00	-21.42
5121.16	51.10	PK	222	1.4	H	-1.09	50.01	74.00	-23.99
5121.16	40.75	Ave	222	1.4	H	-1.09	39.66	54.00	-14.34
11400.00	0.37	PK	312	1.6	H	5.14	5.51	68.20	-62.69
11400.00	44.59	Ave	312	1.6	H	5.14	49.73	54.00	-4.27
802.11n(HT20) U-NII-3 Low Channel 5745MHz									
223.45	38.63	QP	231	1.7	H	-11.62	27.01	46.00	-18.99
223.45	47.84	QP	103	1.8	V	-11.62	36.22	46.00	-9.78
4529.57	46.89	PK	133	1.2	H	-2.06	44.83	74.00	-29.17
4529.57	48.43	Ave	133	1.2	H	-2.06	46.37	54.00	-7.63
11490.00	35.76	PK	231	1.6	H	5.93	41.69	68.20	-26.51
11490.00	47.15	Ave	231	1.6	H	5.93	53.08	54.00	-0.92
5356.45	46.67	PK	45	1.8	H	-1.25	45.42	74.00	-28.58
5356.45	38.93	Ave	45	1.8	H	-1.25	37.68	54.00	-16.32

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)
802.11n(HT20) U-NII-3 middle channel 5785MHz									
223.45	38.35	QP	12	1.5	H	-11.62	26.73	46.00	-19.27
223.45	47.80	QP	254	1.4	V	-11.62	36.18	46.00	-9.82
4534.33	45.57	PK	28	1.5	H	-2.03	43.54	74.00	-30.46
4534.33	48.84	Ave	28	1.5	H	-2.03	46.81	54.00	-7.19
11570.00	35.21	PK	120	1.7	H	5.81	41.02	68.20	-27.18
11570.00	47.26	Ave	120	1.7	H	5.81	53.07	54.00	-0.93
5383.57	45.19	PK	69	1.5	H	-1.22	43.97	74.00	-30.03
5383.57	37.77	Ave	69	1.5	H	-1.22	36.55	54.00	-17.45
802.11n(HT20) U-NII-3 High channel 5825MHz									
223.45	36.90	QP	62	1.8	H	-11.62	25.28	46.00	-20.72
223.45	46.41	QP	305	1.5	V	-11.62	34.79	46.00	-11.21
4521.05	45.13	PK	343	1.7	H	-1.84	43.29	74.00	-30.71
4521.05	49.06	Ave	343	1.7	H	-1.84	47.22	54.00	-6.78
11650.00	36.59	PK	255	1.7	H	5.84	42.43	68.20	-25.77
11650.00	45.70	Ave	255	1.7	H	5.84	51.54	54.00	-2.46
5373.21	46.11	PK	151	1.9	H	-1.30	44.81	74.00	-29.19
5373.21	39.39	Ave	151	1.9	H	-1.30	38.09	54.00	-15.91

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)
802.11ac(HT20) U-NII-1 Low Channel 5180MHz									
223.45	35.81	QP	150	1.2	H	-11.62	24.19	46.00	-21.81
223.45	45.88	QP	174	1.6	V	-11.62	34.26	46.00	-11.74
4518.62	44.78	PK	135	1.2	H	-1.86	42.92	74.00	-31.08
4518.62	39.48	Ave	135	1.2	H	-1.86	37.62	54.00	-16.38
5115.30	43.02	PK	184	1.0	H	-1.06	41.96	74.00	-32.04
5115.30	38.42	Ave	184	1.0	H	-1.06	37.36	54.00	-16.64
10360.00	46.75	PK	77	1.8	H	5.33	52.08	74.00	-21.92
10360.00	39.62	Ave	77	1.8	H	5.33	44.95	54.00	-9.05
802.11ac(HT20) U-NII-1 Middle channel 5200MHz									
223.45	35.66	QP	321	1.9	H	-11.62	24.04	46.00	-21.96
223.45	46.80	QP	341	1.6	V	-11.62	35.18	46.00	-10.82
4533.30	45.65	PK	171	1.0	H	-1.82	43.83	74.00	-30.17
4533.30	38.90	Ave	171	1.0	H	-1.82	37.08	54.00	-16.92
5141.28	42.70	PK	172	1.1	H	-1.06	41.64	74.00	-32.36
5141.28	39.51	Ave	172	1.1	H	-1.06	38.45	54.00	-15.55
10400.00	40.38	PK	235	1.3	H	5.21	45.59	74.00	-28.41
10400.00	34.99	Ave	235	1.3	H	5.21	40.20	54.00	-13.80

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	36.42	QP	72	1.3	H	-11.62	24.80	46.00	-21.20
223.45	46.91	QP	320	1.9	V	-11.62	35.29	46.00	-10.71
4516.18	45.24	PK	67	1.3	H	-1.81	43.43	74.00	-30.57
4516.18	38.33	Ave	67	1.3	H	-1.81	36.52	54.00	-17.48
5142.50	44.13	PK	3	1.9	H	-1.06	43.07	74.00	-30.93
5142.50	41.22	Ave	3	1.9	H	-1.06	40.16	54.00	-13.84
10480.00	40.80	PK	18	1.9	H	5.14	45.94	74.00	-28.06
10480.00	34.68	Ave	18	1.9	H	5.14	39.82	54.00	-14.18
802.11ac(HT20) U-NII-2A Low Channel 5260MHz									
223.45	44.11	QP	270	1.2	H	-11.62	32.49	46.00	-13.51
223.45	40.47	QP	290	1.2	V	-11.62	28.85	46.00	-17.15
4532.47	40.02	PK	227	1.5	H	-2.03	37.99	74.00	-36.01
4532.47	35.56	Ave	227	1.5	H	-2.03	33.53	54.00	-20.47
5117.86	48.04	PK	122	1.6	H	-1.02	47.02	74.00	-26.98
5117.86	41.27	Ave	122	1.6	H	-1.02	40.25	54.00	-13.75
10520.00	42.74	PK	267	1.7	H	5.33	48.07	74.00	-25.93
10520.00	37.75	Ave	267	1.7	H	5.33	43.08	54.00	-10.92

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(HT20) U-NII-2A middle channel 5280MHz									
223.45	44.63	QP	2	1.1	H	-11.62	33.01	46.00	-12.99
223.45	40.48	QP	296	1.0	V	-11.62	28.86	46.00	-17.14
4520.00	40.83	PK	219	1.9	H	-1.94	38.89	74.00	-35.11
4520.00	36.23	Ave	219	1.9	H	-1.94	34.29	54.00	-19.71
5126.28	47.34	PK	206	1.4	H	-1.06	46.28	74.00	-27.72
5126.28	40.94	Ave	206	1.4	H	-1.06	39.88	54.00	-14.12
10560.00	43.57	PK	11	1.2	H	5.21	48.78	74.00	-25.22
10560.00	36.46	Ave	11	1.2	H	5.21	41.67	54.00	-12.33
802.11ac(HT20) U-NII-2A High channel 5320MHz									
223.45	45.41	QP	82	1.9	H	-11.62	33.79	46.00	-12.21
223.45	39.51	QP	189	1.4	V	-11.62	27.89	46.00	-18.11
4527.89	39.54	PK	189	1.0	H	-2.24	37.30	74.00	-36.70
4527.89	35.62	Ave	189	1.0	H	-2.24	33.38	54.00	-20.62
5119.56	46.43	PK	230	2.0	H	-1.09	45.34	74.00	-28.66
5119.56	40.43	Ave	230	2.0	H	-1.09	39.34	54.00	-14.66
10640.00	41.31	PK	298	1.0	H	5.14	46.45	68.20	-21.75
10640.00	38.68	Ave	298	1.0	H	5.14	43.82	54.00	-10.18

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)
802.11ac(HT20) U-NII-2C Low Channel 5500MHz									
223.45	47.76	QP	328	1.1	H	-11.62	36.14	46.00	-9.86
223.45	40.08	QP	226	1.1	V	-11.62	28.46	46.00	-17.54
4516.89	41.15	PK	344	1.4	H	-2.03	39.12	74.00	-34.88
4516.89	38.96	Ave	344	1.4	H	-2.03	36.93	54.00	-17.07
5136.48	46.83	PK	148	1.9	H	-1.02	45.81	74.00	-28.19
5136.48	40.74	Ave	148	1.9	H	-1.02	39.72	54.00	-14.28
11000.00	1.10	PK	126	1.7	H	5.33	6.43	68.20	-61.77
11000.00	44.05	Ave	126	1.7	H	5.33	49.38	54.00	-4.62
802.11ac(HT20) U-NII-2C Middle channel 5600MHz									
223.45	48.39	QP	224	1.5	H	-11.62	36.77	46.00	-9.23
223.45	39.60	QP	106	1.5	V	-11.62	27.98	46.00	-18.02
4509.53	41.54	PK	208	1.4	H	-1.94	39.60	74.00	-34.40
4509.53	40.06	Ave	208	1.4	H	-1.94	38.12	54.00	-15.88
5120.19	46.70	PK	164	1.2	H	-1.06	45.64	74.00	-28.36
5120.19	41.79	Ave	164	1.2	H	-1.06	40.73	54.00	-13.27
11200.00	0.62	PK	360	1.5	H	5.21	5.83	68.20	-62.37
11200.00	44.36	Ave	360	1.5	H	5.21	49.57	54.00	-4.43

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 High channel 5700MHz									
223.45	49.31	QP	180	1.5	H	-11.62	37.69	46.00	-8.31
223.45	39.75	QP	9	1.0	V	-11.62	28.13	46.00	-17.87
4506.30	41.03	PK	163	1.9	H	-2.24	38.79	74.00	-35.21
4506.30	39.87	Ave	163	1.9	H	-2.24	37.63	54.00	-16.37
5148.82	48.15	PK	10	1.6	H	-1.09	47.06	74.00	-26.94
5148.82	43.49	Ave	10	1.6	H	-1.09	42.40	54.00	-11.60
11400.00	0.80	PK	228	1.6	H	5.14	5.94	68.20	-62.26
11400.00	44.88	Ave	228	1.6	H	5.14	50.02	54.00	-3.98
802.11ac(HT20) U-NII-3 Low Channel 5745MHz									
223.45	36.16	QP	158	1.8	H	-11.62	24.54	46.00	-21.46
223.45	45.64	QP	221	2.0	V	-11.62	34.02	46.00	-11.98
4514.03	43.63	PK	292	1.6	H	-1.92	41.71	74.00	-32.29
4514.03	37.29	Ave	292	1.6	H	-1.92	35.37	54.00	-18.63
11490.00	40.24	PK	218	1.2	H	5.93	46.17	68.20	-22.03
11490.00	34.23	Ave	218	1.2	H	5.93	40.16	54.00	-13.84
5378.51	45.68	PK	358	1.6	H	-1.03	44.65	74.00	-29.35
5378.51	38.38	Ave	358	1.6	H	-1.03	37.35	54.00	-16.65

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	36.57	QP	331	1.2	H	-11.62	24.95	46.00	-21.05
223.45	45.65	QP	49	1.4	V	-11.62	34.03	46.00	-11.97
4524.37	43.52	PK	27	1.4	H	-1.97	41.55	74.00	-32.45
4524.37	36.74	Ave	27	1.4	H	-1.97	34.77	54.00	-19.23
11570.00	40.80	PK	103	1.4	H	5.81	46.61	68.20	-21.59
11570.00	35.91	Ave	103	1.4	H	5.81	41.72	54.00	-12.28
5369.36	46.67	PK	204	1.2	H	-1.05	45.62	74.00	-28.38
5369.36	38.96	Ave	204	1.2	H	-1.05	37.91	54.00	-16.09
802.11ac(HT20) U-NII-3 High channel 5825MHz									
223.45	36.44	QP	131	1.1	H	-11.62	24.82	46.00	-21.18
223.45	45.68	QP	226	1.4	V	-11.62	34.06	46.00	-11.94
4515.31	43.30	PK	285	2.0	H	-1.88	41.42	74.00	-32.58
4515.31	35.81	Ave	285	2.0	H	-1.88	33.93	54.00	-20.07
11650.00	41.43	PK	137	1.7	H	5.84	47.27	68.20	-20.93
11650.00	35.14	Ave	137	1.7	H	5.84	40.98	54.00	-13.02
5369.52	46.79	PK	206	1.5	H	-1.06	45.73	74.00	-28.27
5369.52	37.26	Ave	206	1.5	H	-1.06	36.20	54.00	-17.80

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	36.49	QP	306	1.2	H	-11.62	24.87	46.00	-21.13
223.45	45.81	QP	20	1.4	V	-11.62	34.19	46.00	-11.81
4523.03	41.06	PK	233	1.2	H	-1.89	39.17	74.00	-34.83
4523.03	34.37	Ave	233	1.2	H	-1.89	32.48	54.00	-21.52
5145.03	45.59	PK	241	1.6	H	-1.06	44.53	74.00	-29.47
5145.03	37.14	Ave	241	1.6	H	-1.06	36.08	54.00	-17.92
10380.00	39.22	PK	262	1.2	H	5.26	44.48	74.00	-29.52
10380.00	34.06	Ave	262	1.2	H	5.26	39.32	54.00	-14.68
802.11n(HT40) U-NII-1 High channel 5230MHz									
223.45	37.23	QP	11	1.2	H	-11.62	25.61	46.00	-20.39
223.45	45.15	QP	318	1.9	V	-11.62	33.53	46.00	-12.47
4535.51	41.23	PK	182	1.8	H	-1.94	39.29	74.00	-34.71
4535.51	34.81	Ave	182	1.8	H	-1.94	32.87	54.00	-21.13
5140.15	46.62	PK	352	1.9	H	-1.06	45.56	74.00	-28.44
5140.15	36.35	Ave	352	1.9	H	-1.06	35.29	54.00	-18.71
10460.00	42.17	PK	181	1.9	H	5.28	47.45	74.00	-26.55
10480.00	35.27	Ave	181	1.9	H	5.28	40.55	54.00	-13.45

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-2A Low Channel 5270MHz									
223.45	46.65	QP	336	1.8	H	-11.62	35.03	46.00	-10.97
223.45	35.55	QP	74	1.7	V	-11.62	23.93	46.00	-22.07
4521.91	43.06	PK	222	2.0	H	-1.89	41.17	74.00	-32.83
4521.91	34.42	Ave	222	2.0	H	-1.89	32.53	54.00	-21.47
5132.84	47.14	PK	26	1.6	H	-1.06	46.08	74.00	-27.92
5132.84	39.35	Ave	26	1.6	H	-1.06	38.29	54.00	-15.71
10540.00	45.18	PK	92	1.9	H	5.26	50.44	74.00	-23.56
10540.00	37.65	Ave	92	1.9	H	5.26	42.91	54.00	-11.09
802.11n(HT40) U-NII-2A High channel 5310MHz									
223.45	46.49	QP	164	1.4	H	-11.62	34.87	46.00	-11.13
223.45	36.43	QP	240	1.6	V	-11.62	24.81	46.00	-21.19
4518.34	42.77	PK	21	1.2	H	-1.94	40.83	74.00	-33.17
4518.34	35.30	Ave	21	1.2	H	-1.94	33.36	54.00	-20.64
5120.46	47.63	PK	290	1.5	H	-1.06	46.57	74.00	-27.43
5120.46	39.37	Ave	290	1.5	H	-1.06	38.31	54.00	-15.69
10620.00	42.24	PK	210	1.7	H	5.28	47.52	68.20	-20.68
10620.00	35.75	Ave	210	1.7	H	5.28	41.03	54.00	-12.97

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(HT40) U-NII-2C Low Channel 5510MHz									
223.45	47.90	QP	4	1.8	H	-11.62	36.28	46.00	-9.72
223.45	38.65	QP	282	1.8	V	-11.62	27.03	46.00	-18.97
4504.08	42.49	PK	63	1.2	H	-1.89	40.60	74.00	-33.40
4504.08	35.42	Ave	63	1.2	H	-1.89	33.53	54.00	-20.47
5141.98	46.29	PK	179	1.5	H	-1.06	45.23	74.00	-28.77
5141.98	36.53	Ave	179	1.5	H	-1.06	35.47	54.00	-18.53
11020.00	44.04	PK	169	1.1	H	5.26	49.30	68.20	-18.90
11020.00	37.87	Ave	169	1.1	H	5.26	43.13	54.00	-10.87
802.11n(HT40) U-NII-2C Middle channel 5550MHz									
223.45	48.32	QP	211	1.3	H	-11.62	36.70	46.00	-9.30
223.45	38.70	QP	117	1.5	V	-11.62	27.08	46.00	-18.92
4517.83	42.88	PK	244	1.8	H	-1.94	40.94	74.00	-33.06
4517.83	35.93	Ave	244	1.8	H	-1.94	33.99	54.00	-20.01
5134.18	48.03	PK	104	1.1	H	-1.06	46.97	74.00	-27.03
5134.18	38.46	Ave	104	1.1	H	-1.06	37.40	54.00	-16.60
11100.00	47.22	PK	85	2.0	H	5.28	52.50	68.20	-15.70
11100.00	37.86	Ave	85	2.0	H	5.28	43.14	54.00	-10.86
802.11n(HT40) U-NII-2C High channel 5670MHz									
223.45	47.37	QP	10	1.9	H	-11.62	35.75	46.00	-10.25
223.45	39.00	QP	260	1.7	V	-11.62	27.38	46.00	-18.62
4536.11	42.47	PK	107	1.6	H	-1.94	40.53	74.00	-33.47
4536.11	36.17	Ave	107	1.6	H	-1.94	34.23	54.00	-19.77
5114.45	48.49	PK	336	1.4	H	-1.06	47.43	74.00	-26.57
5114.45	38.85	Ave	336	1.4	H	-1.06	37.79	54.00	-16.21
11340.00	41.08	PK	300	1.6	H	5.28	46.36	68.20	-21.84
11340.00	36.37	Ave	300	1.6	H	5.28	41.65	54.00	-12.35

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	36.26	QP	337	1.8	H	-11.62	24.64	46.00	-21.36
223.45	46.00	QP	11	1.3	V	-11.62	34.38	46.00	-11.62
4532.76	39.66	PK	131	1.0	H	-1.96	37.70	74.00	-36.30
4532.76	33.80	Ave	131	1.0	H	-1.96	31.84	54.00	-22.16
11510.00	38.52	PK	130	1.4	H	5.88	44.40	68.20	-23.80
11510.00	33.15	Ave	130	1.4	H	5.88	39.03	54.00	-14.97
5362.41	45.37	PK	171	1.9	H	-1.01	44.36	74.00	-29.64
5362.41	38.47	Ave	171	1.9	H	-1.01	37.46	54.00	-16.54
802.11n(HT40) U-NII-3 High Channel 5795MHz									
223.45	36.66	QP	27	1.0	H	-11.62	25.04	46.00	-20.96
223.45	45.95	QP	197	1.4	V	-11.62	34.33	46.00	-11.67
4538.56	39.94	PK	181	1.9	H	-1.92	38.02	74.00	-35.98
4538.56	33.31	Ave	181	1.9	H	-1.92	31.39	54.00	-22.61
11590.00	41.32	PK	20	1.0	H	5.63	46.95	68.20	-21.25
11590.00	34.73	Ave	20	1.0	H	5.63	40.36	54.00	-13.64
5389.83	45.86	PK	34	1.5	H	-1.04	44.82	74.00	-29.18
5389.83	39.22	Ave	34	1.5	H	-1.04	38.18	54.00	-15.82

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(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	36.34	QP	311	1.2	H	-11.62	24.72	46.00	-21.28
223.45	47.40	QP	309	1.4	V	-11.62	35.78	46.00	-10.22
4532.00	37.35	PK	33	1.4	H	-1.91	35.44	74.00	-38.56
4532.00	30.46	Ave	33	1.4	H	-1.91	28.55	54.00	-25.45
5120.02	45.78	PK	304	1.1	H	-1.06	44.72	74.00	-29.28
5120.02	38.86	Ave	304	1.1	H	-1.06	37.80	54.00	-16.20
10380.00	38.33	PK	112	1.0	H	5.26	43.59	74.00	-30.41
10380.00	33.26	Ave	112	1.0	H	5.26	38.52	54.00	-15.48
802.11ac(HT40) U-NII-1 High channel 5230MHz									
223.45	35.82	QP	346	1.0	H	-11.62	24.20	46.00	-21.80
223.45	47.15	QP	99	1.3	V	-11.62	35.53	46.00	-10.47
4528.29	36.50	PK	46	1.5	H	-1.93	34.57	74.00	-39.43
4528.29	30.09	Ave	46	1.5	H	-1.93	28.16	54.00	-25.84
5122.56	46.36	PK	3	1.5	H	-1.06	45.30	74.00	-28.70
5122.56	38.42	Ave	3	1.5	H	-1.06	37.36	54.00	-16.64
10460.00	41.95	PK	187	1.5	H	5.28	47.23	74.00	-26.77
10480.00	36.09	Ave	187	1.5	H	5.28	41.37	54.00	-12.63

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)
802.11ac(HT40) U-NII-2A Low Channel 5270MHz									
223.45	46.36	QP	286	1.9	H	-11.62	34.74	46.00	-11.26
223.45	39.22	QP	289	1.0	V	-11.62	27.60	46.00	-18.40
4502.45	41.49	PK	205	1.6	H	-1.89	39.60	74.00	-34.40
4502.45	35.88	Ave	205	1.6	H	-1.89	33.99	54.00	-20.01
5130.13	46.16	PK	250	1.4	H	-1.06	45.10	74.00	-28.90
5130.13	38.30	Ave	250	1.4	H	-1.06	37.24	54.00	-16.76
10540.00	36.23	PK	233	1.1	H	5.26	41.49	74.00	-32.51
10540.00	52.22	Ave	233	1.1	H	5.26	57.48	54.00	3.48
802.11ac(HT40) U-NII-2A High channel 5310MHz									
223.45	45.37	QP	173	1.1	H	-11.62	33.75	46.00	-12.25
223.45	39.76	QP	350	1.6	V	-11.62	28.14	46.00	-17.86
4512.76	41.29	PK	352	1.7	H	-1.94	39.35	74.00	-34.65
4512.76	35.58	Ave	352	1.7	H	-1.94	33.64	54.00	-20.36
5144.10	46.08	PK	6	1.7	H	-1.06	45.02	74.00	-28.98
5144.10	38.43	Ave	6	1.7	H	-1.06	37.37	54.00	-16.63
10620.00	-0.64	PK	177	1.8	H	5.28	4.64	68.20	-63.56
10620.00	43.06	Ave	177	1.8	H	5.28	48.34	54.00	-5.66

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-2C Low Channel 5510MHz									
223.45	45.20	QP	193	1.8	H	-11.62	33.58	46.00	-12.42
223.45	37.67	QP	296	1.6	V	-11.62	26.05	46.00	-19.95
4506.24	-1.52	PK	164	1.9	H	-1.89	-3.41	74.00	-77.41
4506.24	42.66	Ave	164	1.9	H	-1.89	40.77	54.00	-13.23
5121.62	45.70	PK	175	1.9	H	-1.06	44.64	74.00	-29.36
5121.62	39.71	Ave	175	1.9	H	-1.06	38.65	54.00	-15.35
11020.00	39.54	PK	282	1.6	H	5.26	44.80	68.20	-23.40
11020.00	49.53	Ave	282	1.6	H	5.26	54.79	54.00	0.79
802.11ac(HT40) U-NII-2C Middle channel 5550MHz									
223.45	46.07	QP	193	1.0	H	-11.62	34.45	46.00	-11.55
223.45	37.09	QP	331	1.2	V	-11.62	25.47	46.00	-20.53
4507.02	-2.10	PK	271	1.6	H	-1.94	-4.04	74.00	-78.04
4507.02	42.96	Ave	271	1.6	H	-1.94	41.02	54.00	-12.98
5147.50	46.39	PK	288	1.7	H	-1.06	45.33	74.00	-28.67
5147.50	38.78	Ave	288	1.7	H	-1.06	37.72	54.00	-16.28
11100.00	37.41	PK	295	1.7	H	5.28	42.69	68.20	-25.51
11100.00	48.67	Ave	295	1.7	H	5.28	53.95	54.00	-0.05
802.11ac(HT40) U-NII-2C High channel 5670MHz									
223.45	45.34	QP	359	1.8	H	-11.62	33.72	46.00	-12.28
223.45	36.94	QP	343	2.0	V	-11.62	25.32	46.00	-20.68
4525.76	-1.73	PK	260	1.1	H	-1.94	-3.67	74.00	-77.67
4525.76	43.05	Ave	260	1.1	H	-1.94	41.11	54.00	-12.89
5119.28	45.51	PK	331	1.3	H	-1.06	44.45	74.00	-29.55
5119.28	40.04	Ave	331	1.3	H	-1.06	38.98	54.00	-15.02
11340.00	0.99	PK	269	1.8	H	5.28	6.27	68.20	-61.93
11340.00	42.14	Ave	269	1.8	H	5.28	47.42	54.00	-6.58

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	35.40	QP	238	2.0	H	-11.62	23.78	46.00	-22.22
223.45	46.16	QP	204	1.9	V	-11.62	34.54	46.00	-11.46
4507.57	34.06	PK	159	1.9	H	-1.92	32.14	74.00	-41.86
4507.57	27.55	Ave	159	1.9	H	-1.92	25.63	54.00	-28.37
11510.00	39.22	PK	288	1.5	H	5.88	45.10	68.20	-23.10
11510.00	32.75	Ave	288	1.5	H	5.88	38.63	54.00	-15.37
5387.27	46.61	PK	302	1.2	H	-1.07	45.54	74.00	-28.46
5387.27	37.47	Ave	302	1.2	H	-1.07	36.40	54.00	-17.60
802.11ac(HT40) U-NII-3 High Channel 5795MHz									
223.45	34.53	QP	53	1.6	H	-11.62	22.91	46.00	-23.09
223.45	45.77	QP	45	1.7	V	-11.62	34.15	46.00	-11.85
4514.33	33.82	PK	341	1.5	H	-1.86	31.96	74.00	-42.04
4514.33	28.28	Ave	341	1.5	H	-1.86	26.42	54.00	-27.58
11590.00	41.94	PK	284	1.8	H	5.63	47.57	68.20	-20.63
11590.00	35.64	Ave	284	1.8	H	5.63	41.27	54.00	-12.73
5362.22	45.52	PK	257	1.6	H	-1.03	44.49	74.00	-29.51
5362.22	37.95	Ave	257	1.6	H	-1.03	36.92	54.00	-17.08

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 Low Channel 5210MHz									
223.45	45.04	QP	342	1.9	H	-11.62	33.42	46.00	-12.58
4514.33	33.53	QP	292	1.5	V	-11.62	21.91	46.00	-24.09
4507.31	28.28	PK	43	1.8	H	-1.88	26.40	74.00	-47.60
4507.31	41.74	Ave	43	1.8	H	-1.88	39.86	54.00	-14.14
5121.46	35.17	PK	106	1.5	H	-1.06	34.11	74.00	-39.89
5121.46	46.21	Ave	106	1.5	H	-1.06	45.15	54.00	-8.85
10420.00	40.99	PK	334	1.3	H	4.65	45.64	74.00	-28.36
10420.00	34.44	Ave	334	1.3	H	4.65	39.09	54.00	-14.91
802.11ac(HT80) U-NII-2A Low Channel 5290MHz									
4514.33	34.42	QP	32	1.1	H	-11.62	22.80	46.00	-23.20
4507.31	27.30	QP	253	1.4	V	-11.62	15.68	46.00	-30.32
4536.32	42.12	PK	261	1.4	H	-1.88	40.24	74.00	-33.76
4536.32	34.32	Ave	261	1.4	H	-1.88	32.44	54.00	-21.56
5132.44	46.78	PK	164	1.7	H	-1.06	45.72	74.00	-28.28
5132.44	41.05	Ave	164	1.7	H	-1.06	39.99	54.00	-14.01
10580.00	36.72	PK	100	1.7	H	4.65	41.37	74.00	-32.63
10580.00	45.05	Ave	100	1.7	H	4.65	49.70	54.00	-4.30

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)
802.11ac(HT80) U-NII-2C Low Channel 5530MHz									
4507.31	28.27	QP	268	1.3	H	-11.62	16.65	46.00	-29.35
4536.32	42.20	QP	266	1.0	V	-11.62	30.58	46.00	-15.42
4537.16	34.39	PK	203	1.0	H	-1.88	32.51	74.00	-41.49
4537.16	45.88	Ave	203	1.0	H	-1.88	44.00	54.00	-10.00
5115.16	42.64	PK	137	1.2	H	-1.06	41.58	74.00	-32.42
5115.16	35.87	Ave	137	1.2	H	-1.06	34.81	54.00	-19.19
11060.00	44.74	PK	25	1.1	H	4.65	49.39	68.20	-18.81
11060.00	37.89	Ave	25	1.1	H	4.65	42.54	54.00	-11.46
802.11ac(HT80) U-NII-3 Low channel 5775MHz									
4514.33	34.47	QP	173	1.4	H	-11.62	22.85	46.00	-23.15
4507.31	29.13	QP	122	1.4	V	-11.62	17.51	46.00	-28.49
4537.80	41.02	PK	154	1.7	H	-1.85	39.17	74.00	-34.83
4537.80	41.35	Ave	154	1.7	H	-1.85	39.50	54.00	-14.50
11550.00	40.70	PK	188	1.4	H	4.83	45.53	68.20	-22.67
11550.00	35.51	Ave	188	1.4	H	4.83	40.34	54.00	-13.66
5371.70	45.21	PK	204	1.7	H	-1.14	44.07	74.00	-29.93
5371.70	39.32	Ave	204	1.7	H	-1.14	38.18	54.00	-15.82

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:	N/A

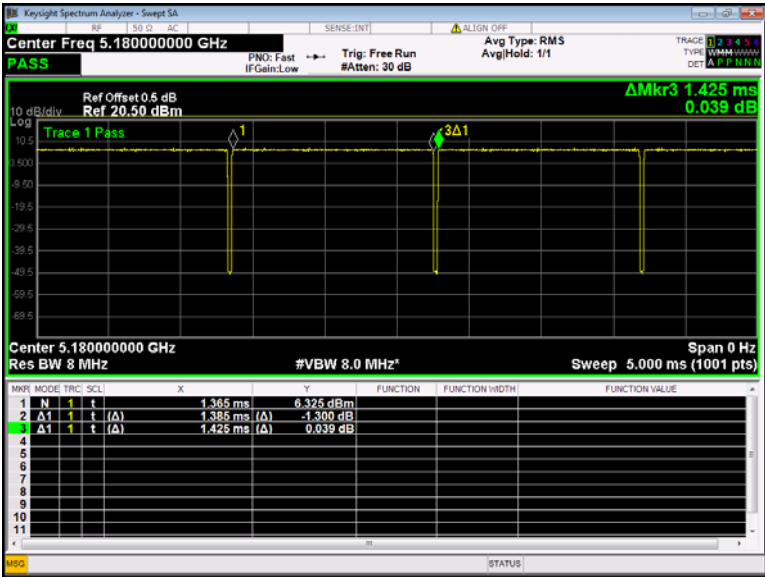
9.1 Summary of Test Results

802.11a(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	1.385	1.425	97.19
52	1.386	1.437	96.45
100	1.384	1.429	96.85
149	1.387	1.430	96.99
802.11n(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	1.290	1.340	96.27
52	1.295	1.339	96.71
100	1.286	1.339	96.04
149	1.287	1.340	96.04
802.11ac(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	1.300	1.350	96.30
52	1.303	1.347	96.73
100	1.301	1.346	96.66
149	1.302	1.345	96.80
802.11n(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	0.647	0.685	94.45
54	0.647	0.688	94.04
102	0.647	0.685	94.45
151	0.647	0.685	94.45

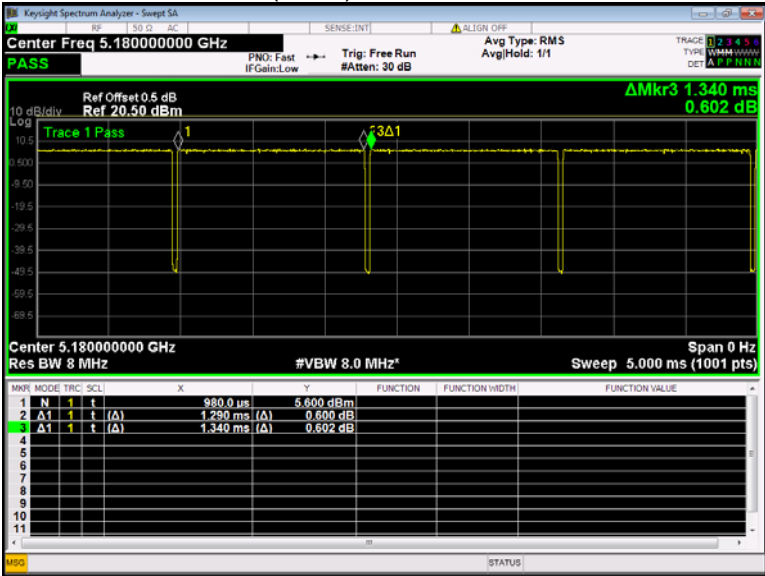
802.11ac(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	0.650	0.686	94.75
54	0.647	0.692	93.50
102	0.644	0.687	93.74
151	0.646	0.687	94.03
802.11ac(HT80) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	0.322	0.360	89.44
54	0.321	0.359	89.42
102	0.323	0.361	89.47
151	0.321	0.359	89.42

Test result plots shown as follows:

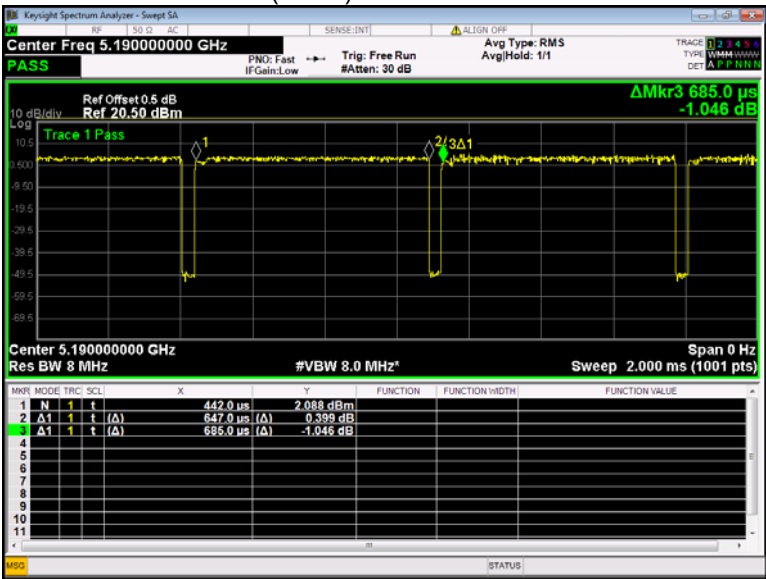
802.11a U-NII-1 Low channel



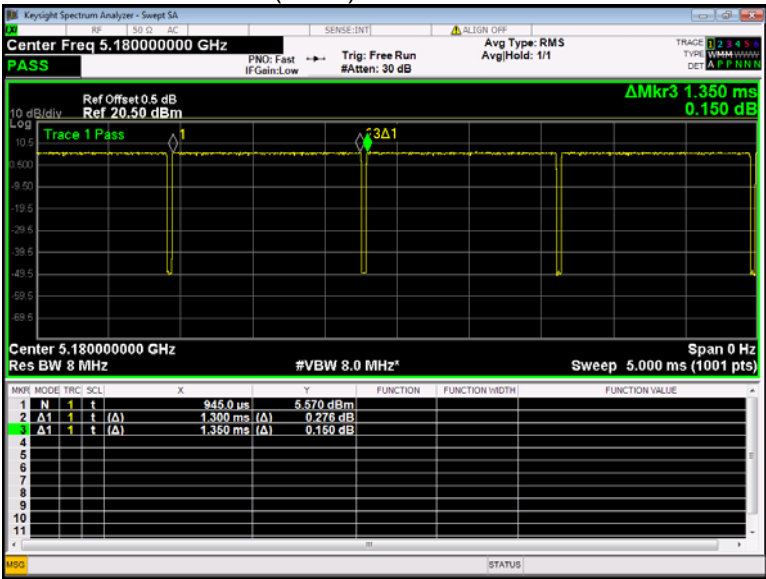
802.11n(HT20) U-NII-1 Low channel



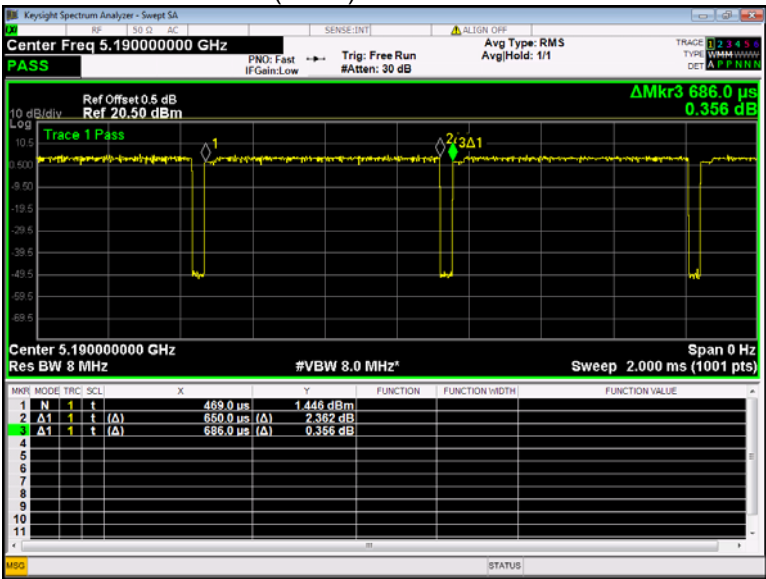
802.11n(HT40) U-NII-1 Low channel



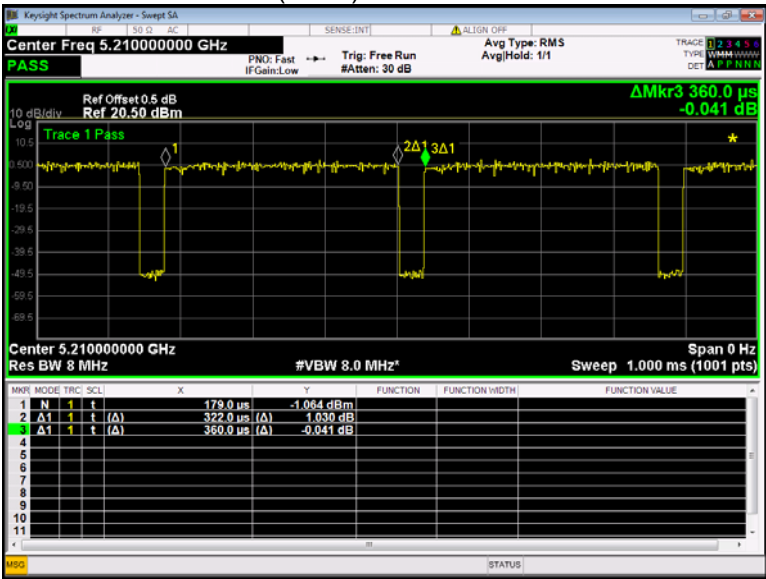
802.11ac(HT20) U-NII-1 Low channel



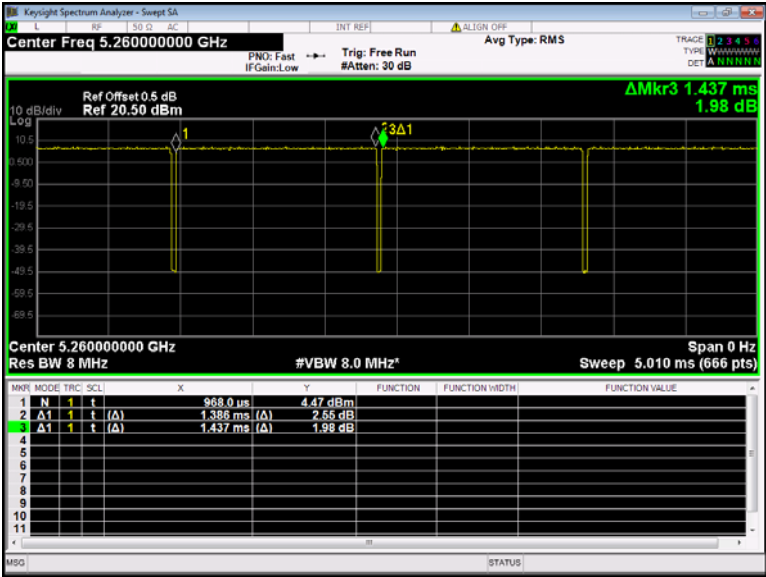
802.11ac(HT40) U-NII-1 Low channel



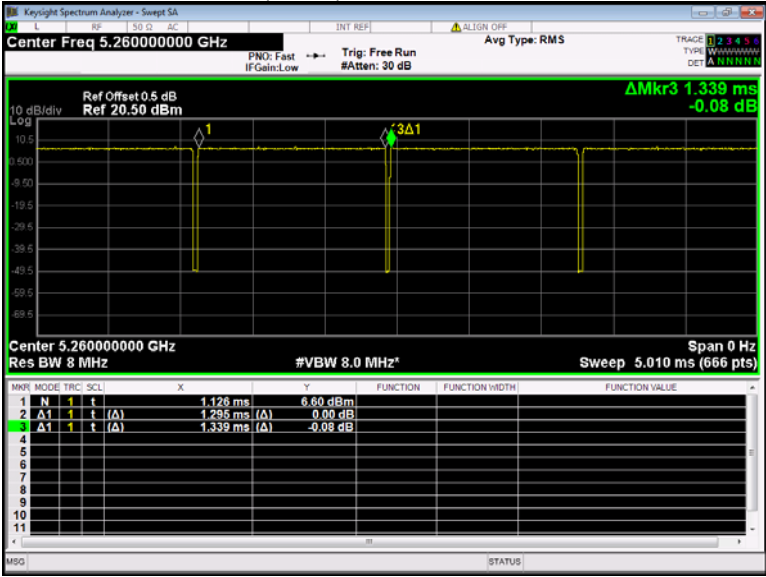
802.11ac(HT80) U-NII-1 Low channel



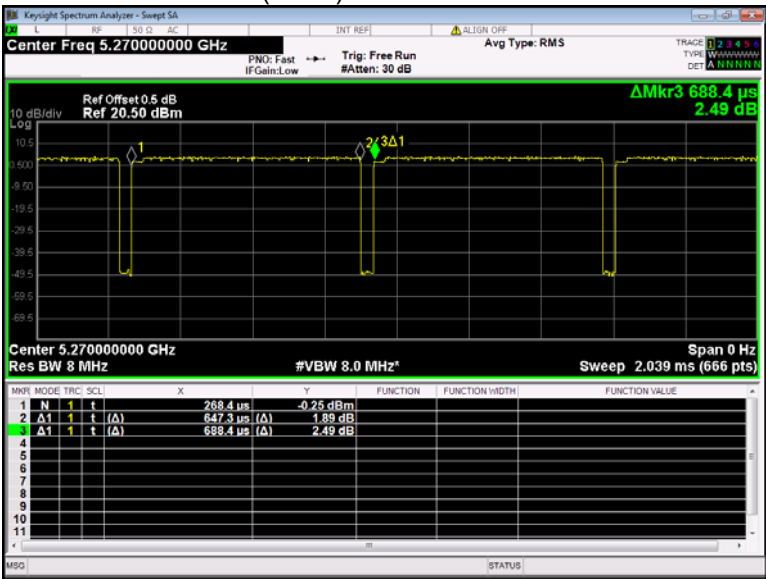
802.11a U-NII-2A Low channel



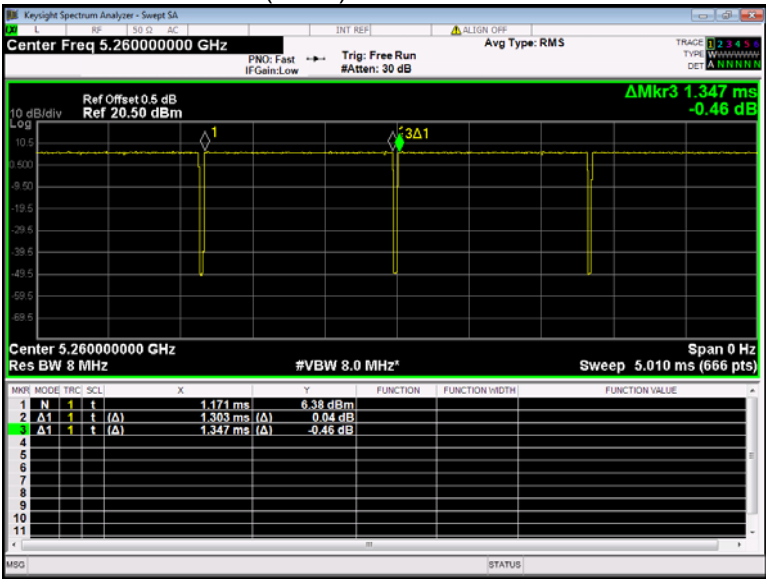
802.11n(HT20) U-NII-2A Low channel



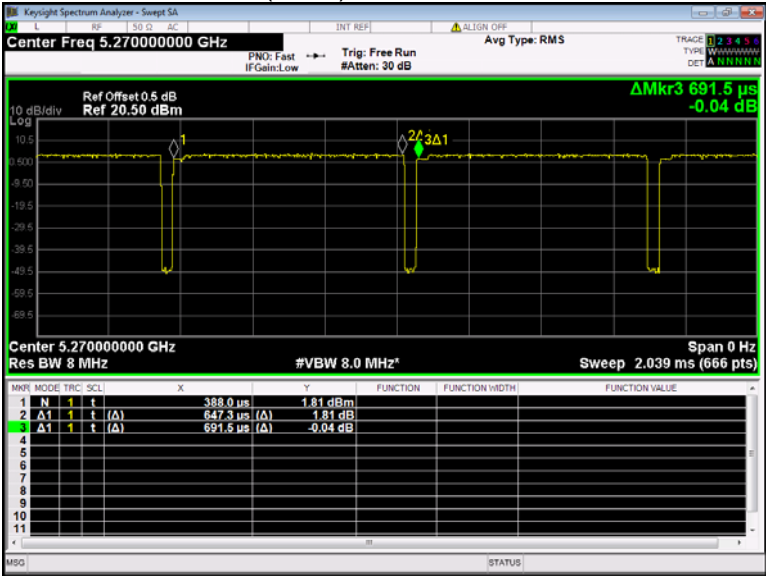
802.11n(HT40) U-NII-2A Low channel



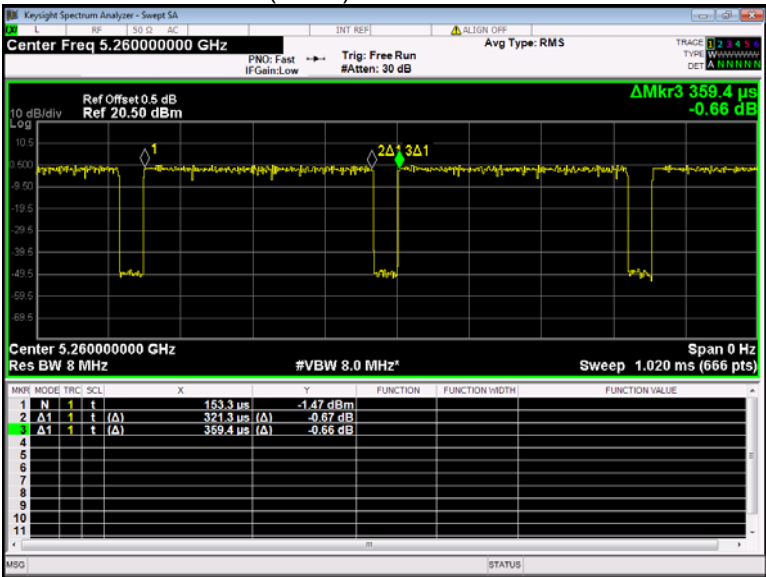
802.11ac(HT20) U-NII-2A Low channel



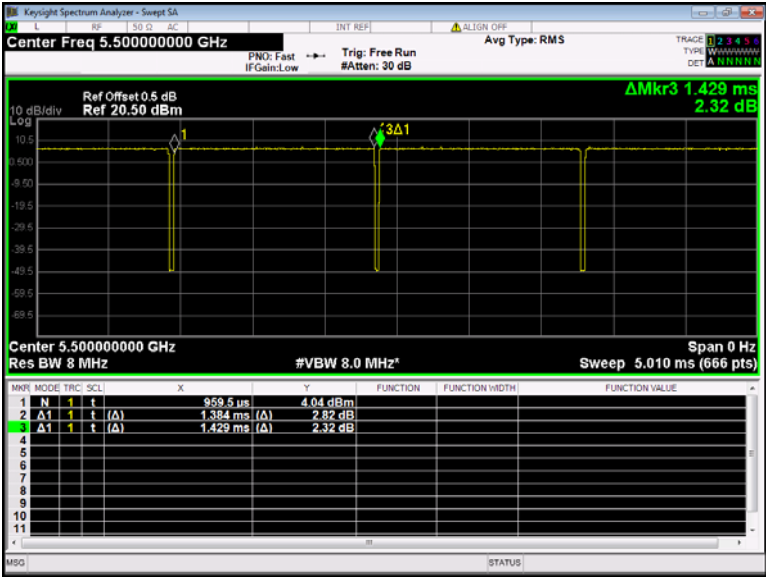
802.11ac(HT40) U-NII-2A Low channel



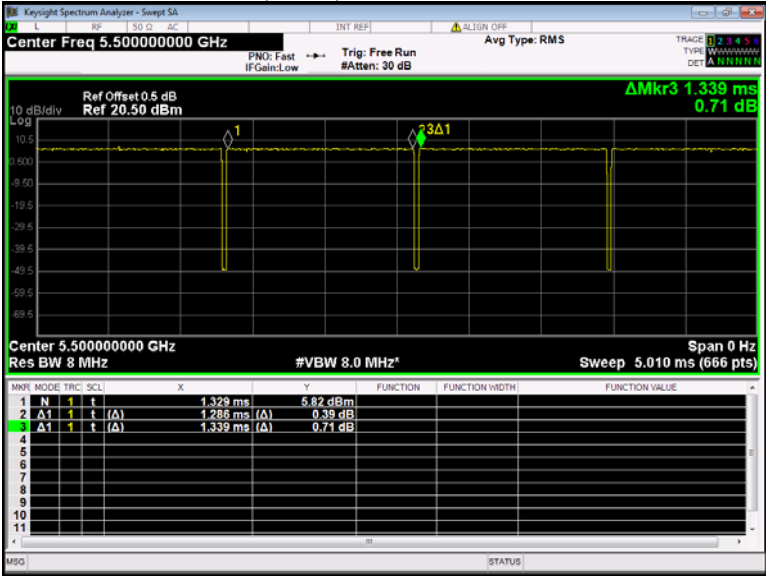
802.11ac(HT80) U-NII-2A Low channel



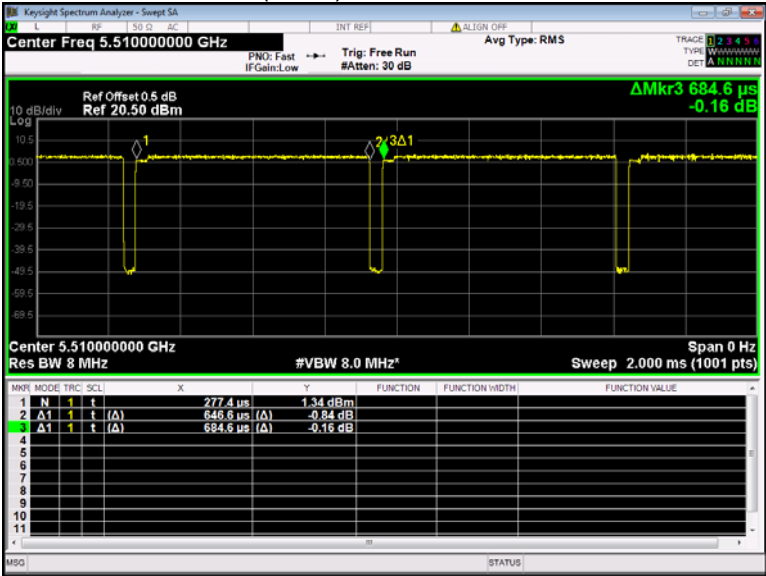
802.11a U-NII-2C Low channel



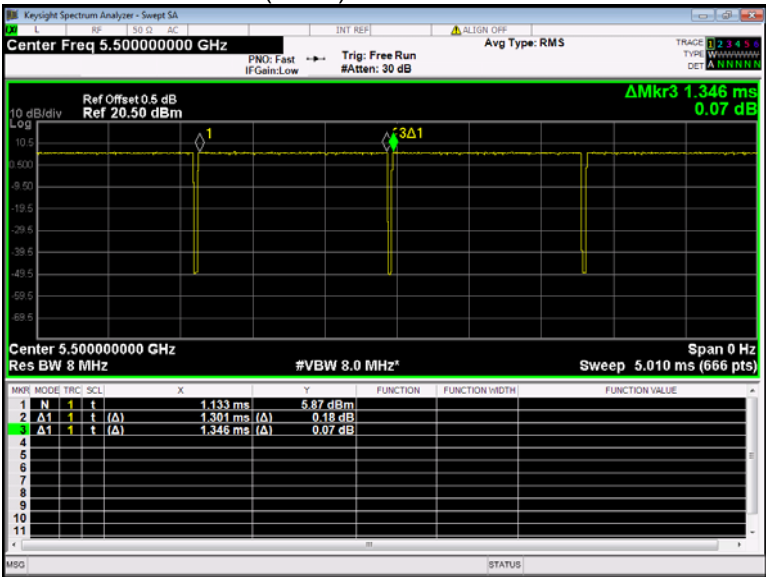
802.11n(HT20) U-NII-2C Low channel



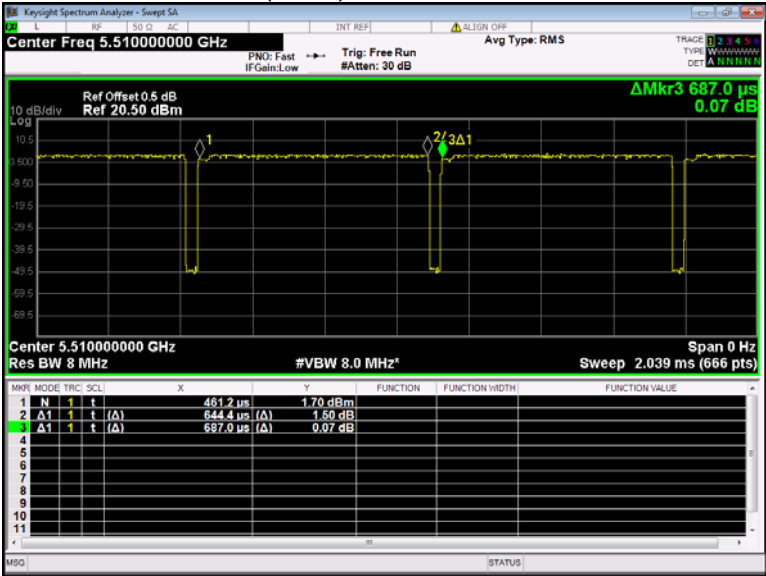
802.11n(HT40) U-NII-2C Low channel



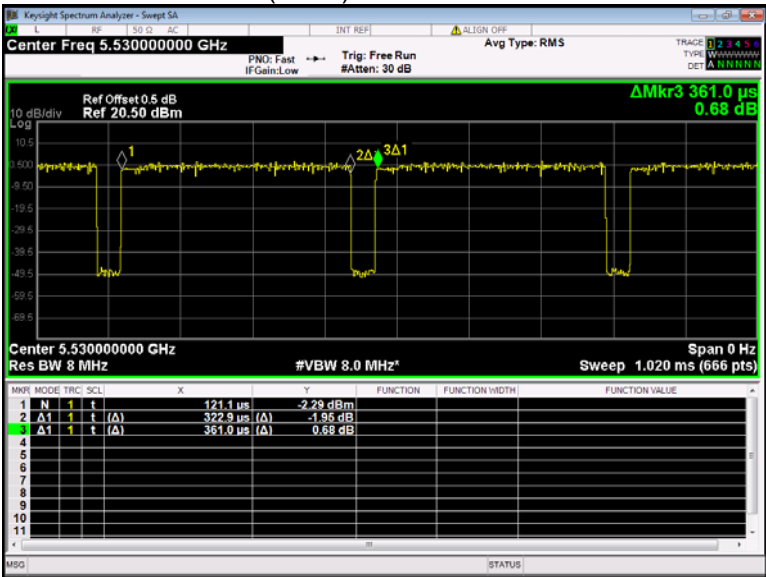
802.11ac(HT20) U-NII-2C Low channel



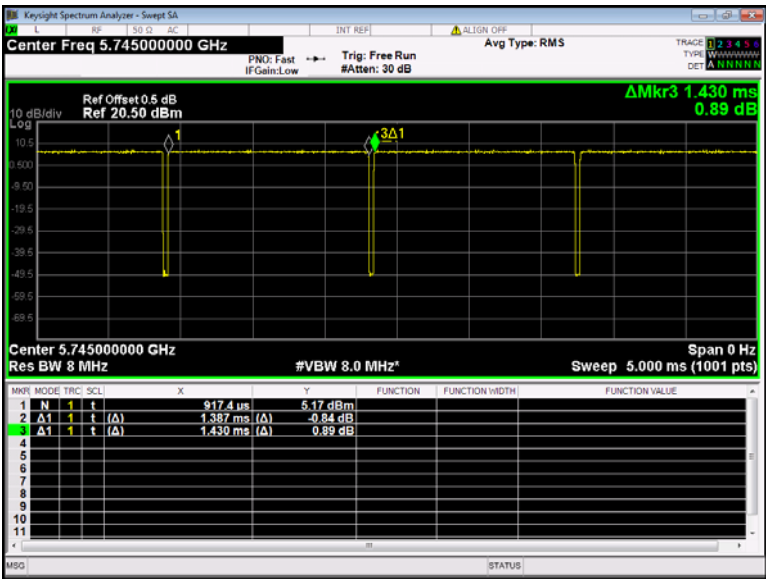
802.11ac(HT40) U-NII-2C Low channel



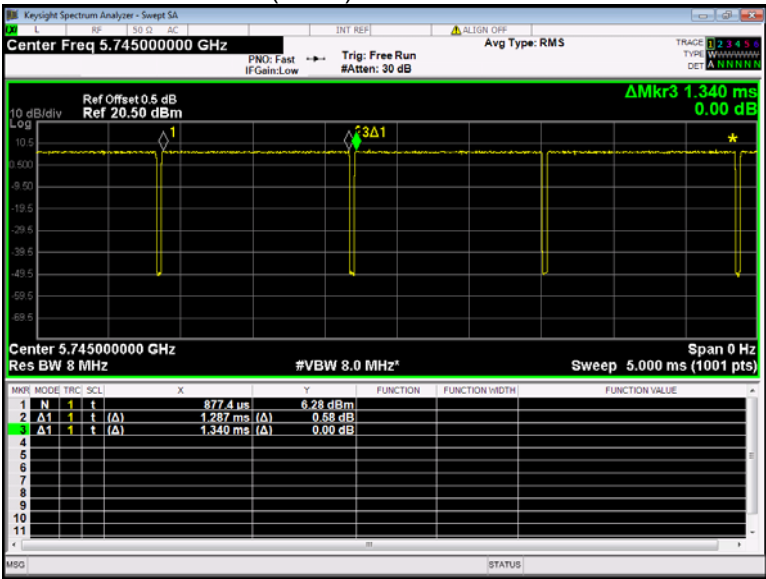
802.11ac(HT80) U-NII-2C Low channel



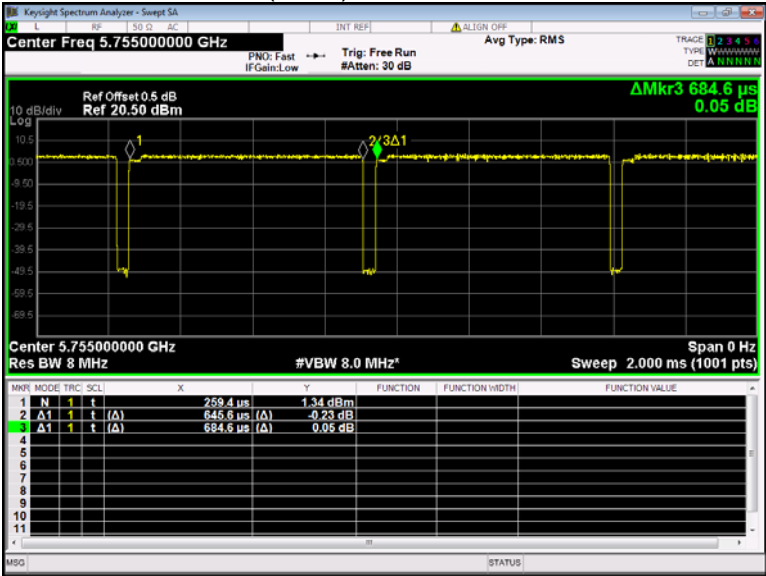
802.11a U-NII-3 Low channel



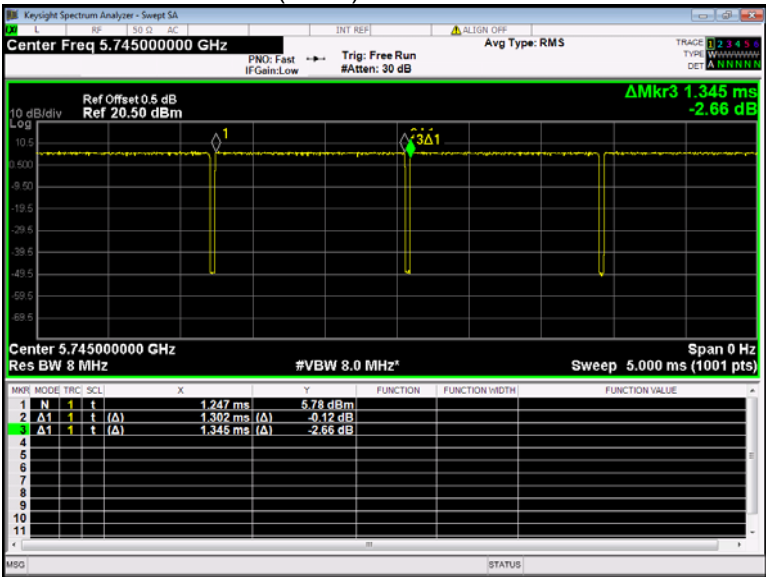
802.11n(HT20) U-NII-3 Low channel



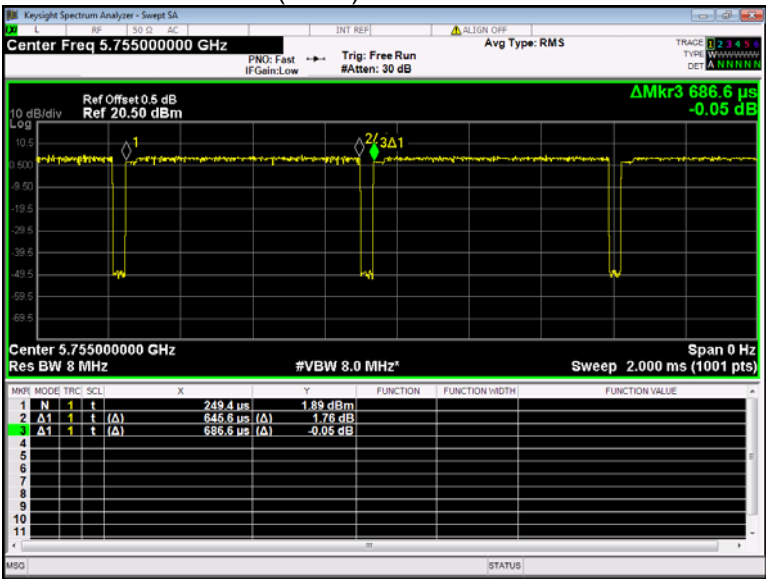
802.11n(HT40) U-NII-3 Low channel



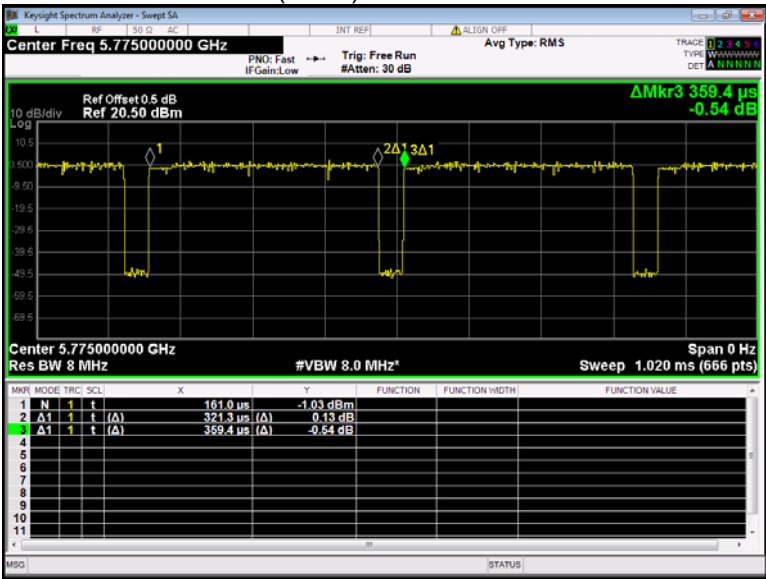
802.11ac(HT20) U-NII-3 Low channel



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:	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. 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. 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. For transmitters operating in the 5.725-5.85 GHz band: (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. (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.
Test Result:	PASS

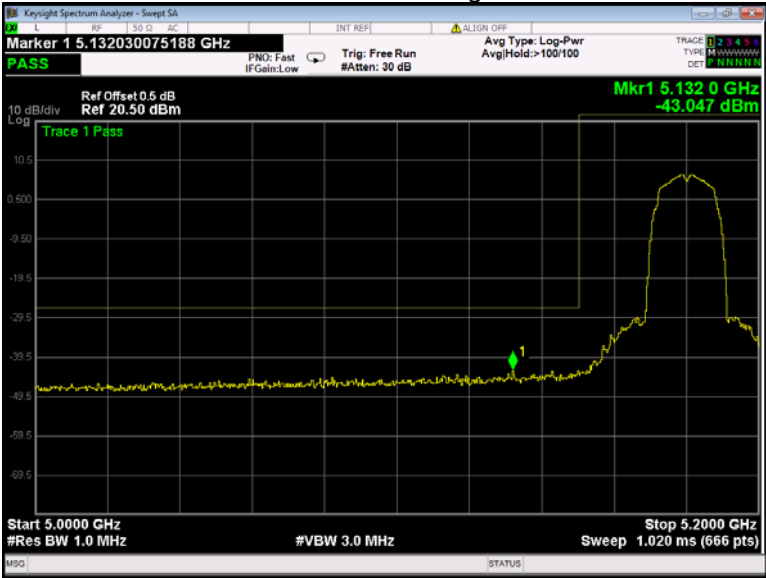
10.1 Test Produce

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.

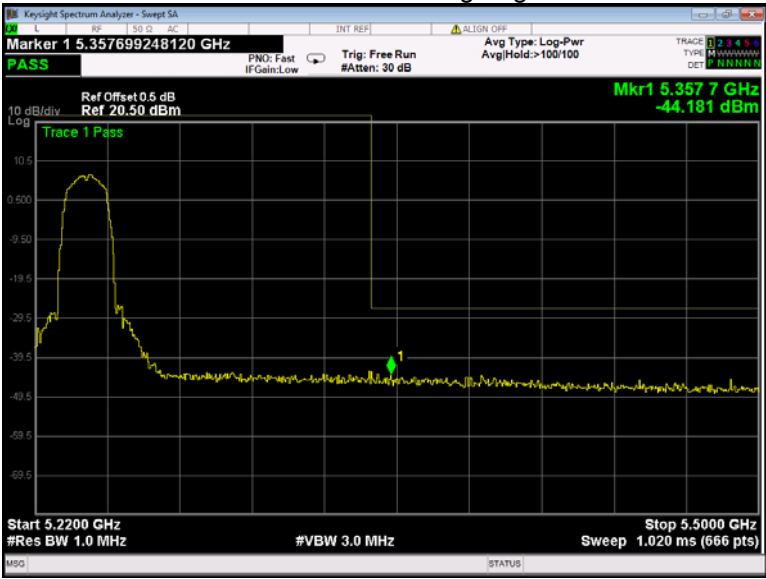
10.2 Test Result

Test result plots shown as follows:

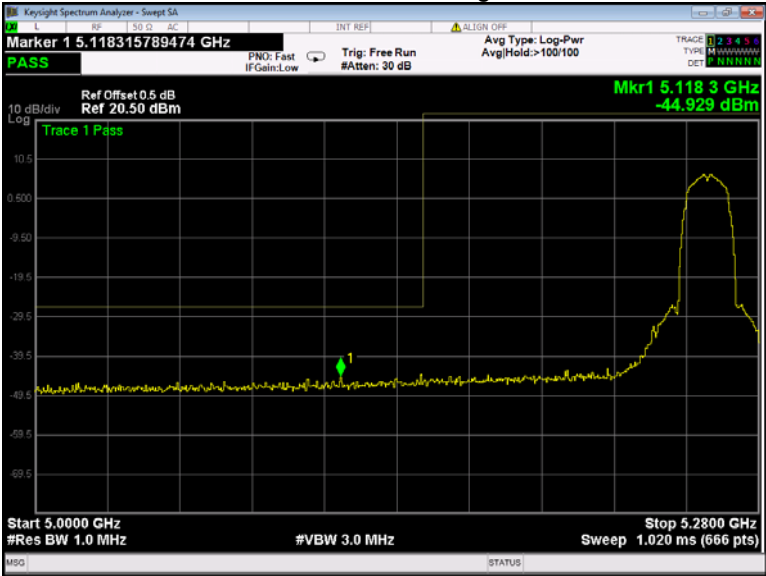
802.11a U-NII-1 Band edge-left side



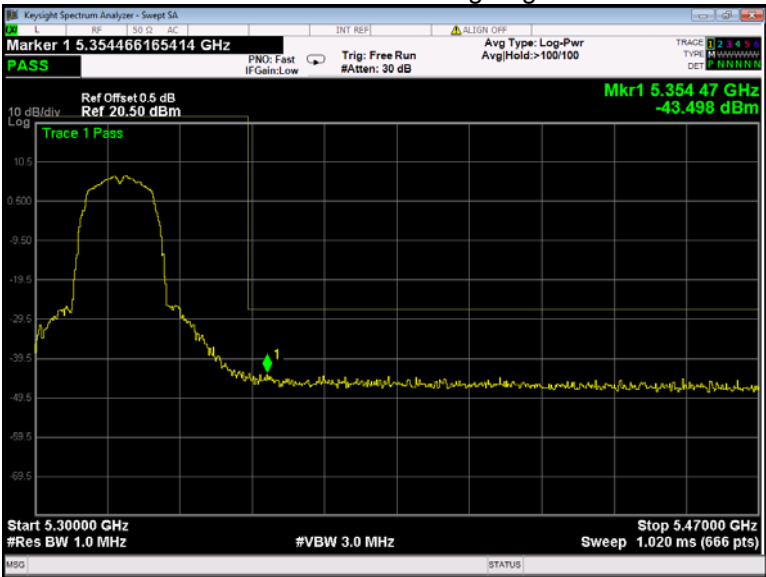
802.11a U-NII-1 Band edge-right side



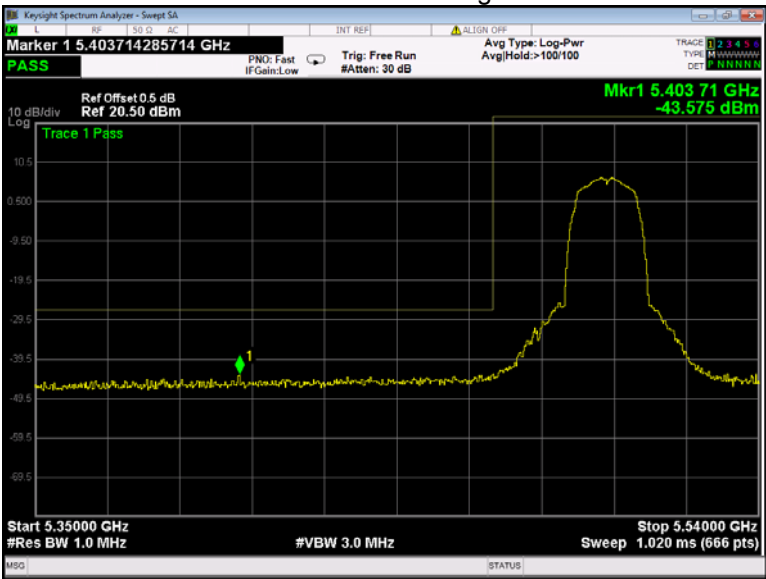
802.11a U-NII-2A Band edge-left side



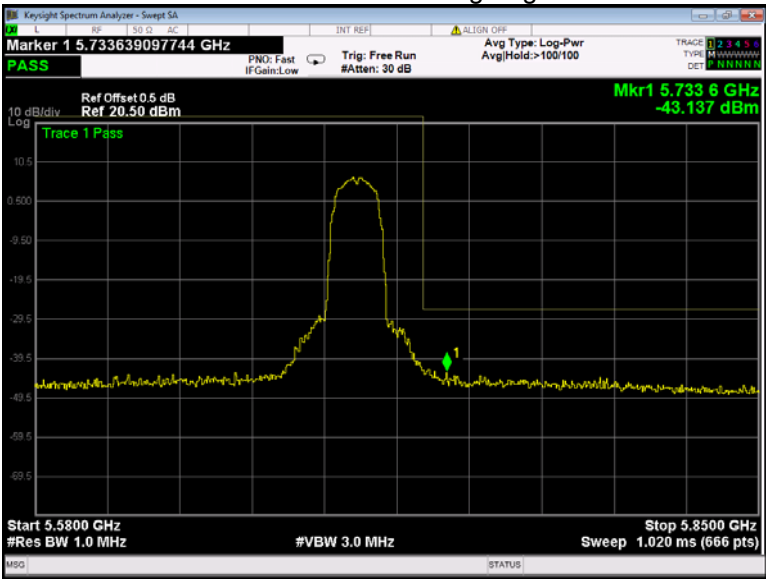
802.11a U-NII-2A Band edge-right side



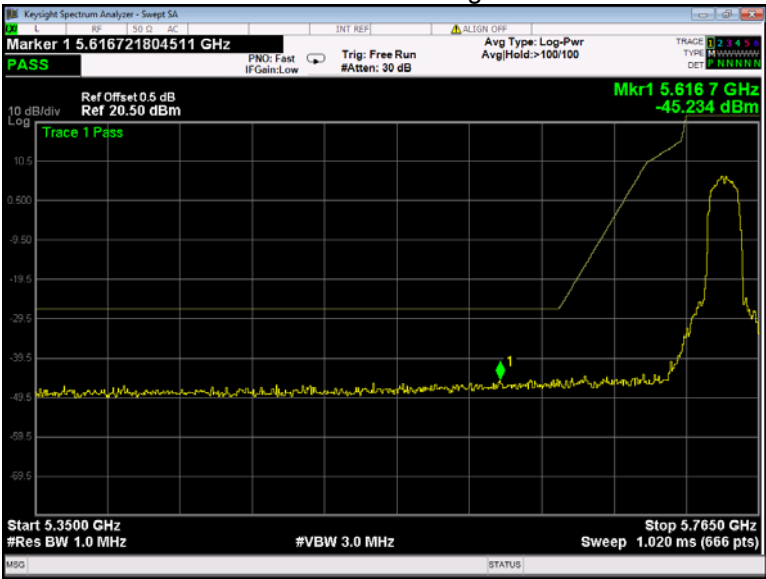
802.11a U-NII-2C Band edge-left side



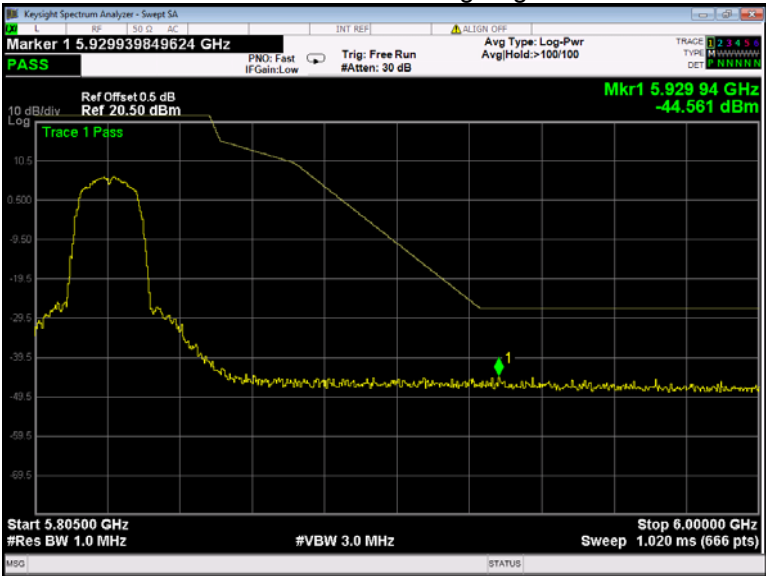
802.11a U-NII-2C Band edge-right side



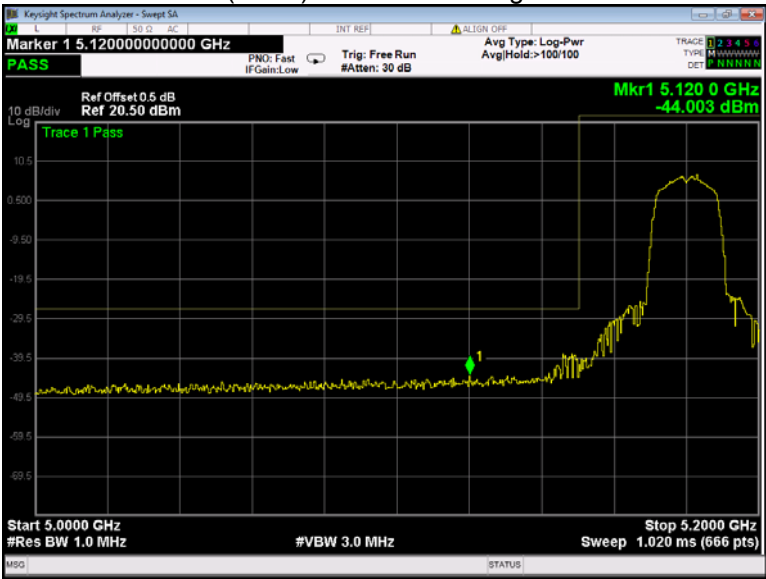
802.11a U-NII-3 Band edge-left side



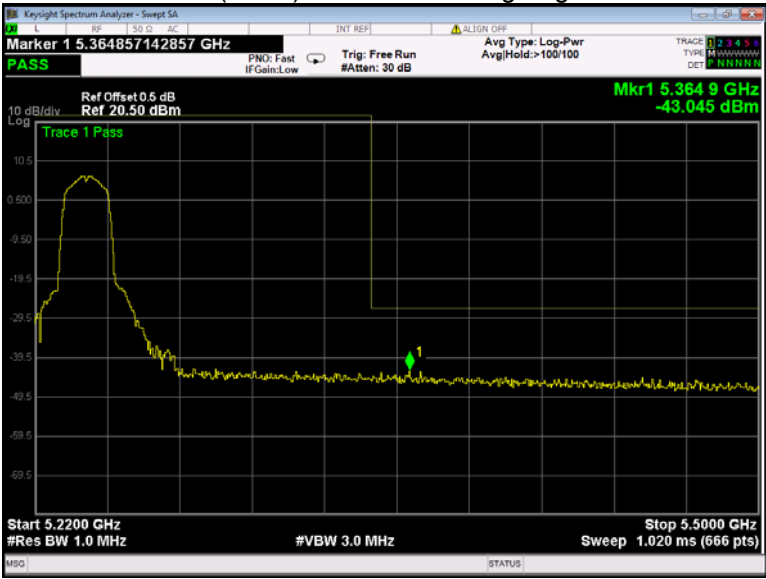
802.11a U-NII-3 Band edge-right side



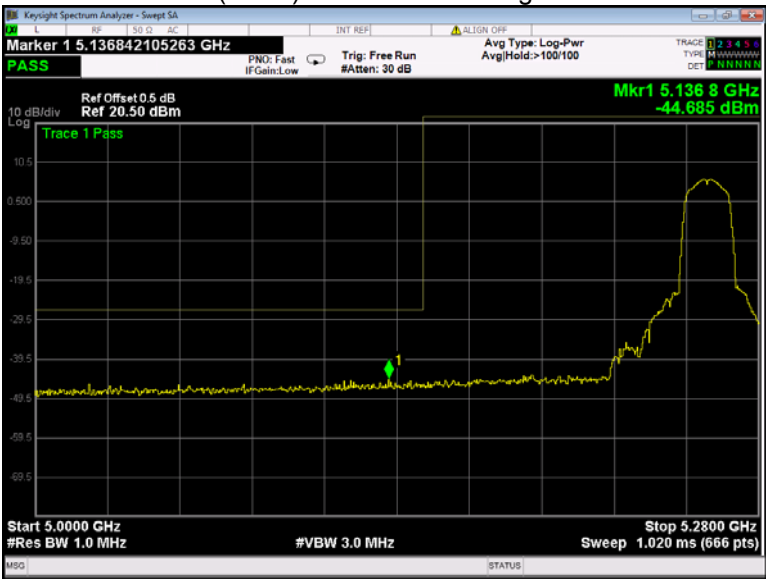
802.11n(HT20) U-NII-1 Band edge-left side



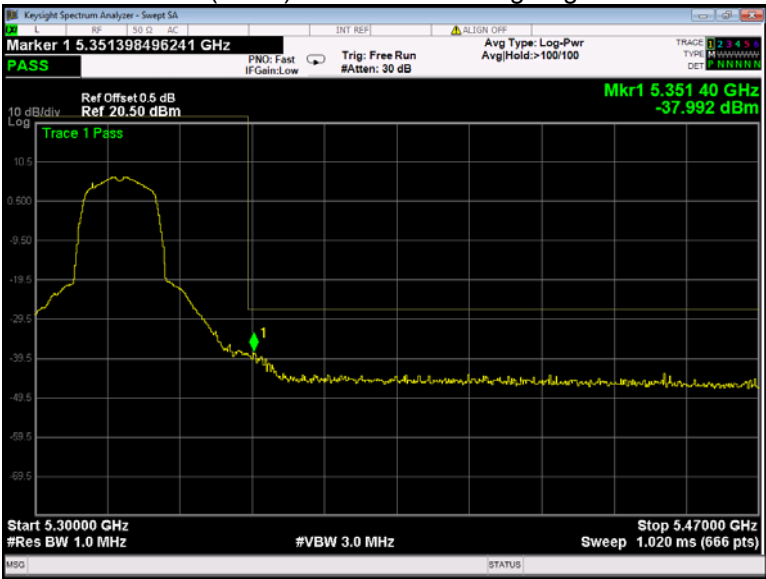
802.11n(HT20) U-NII-1 Band edge-right side



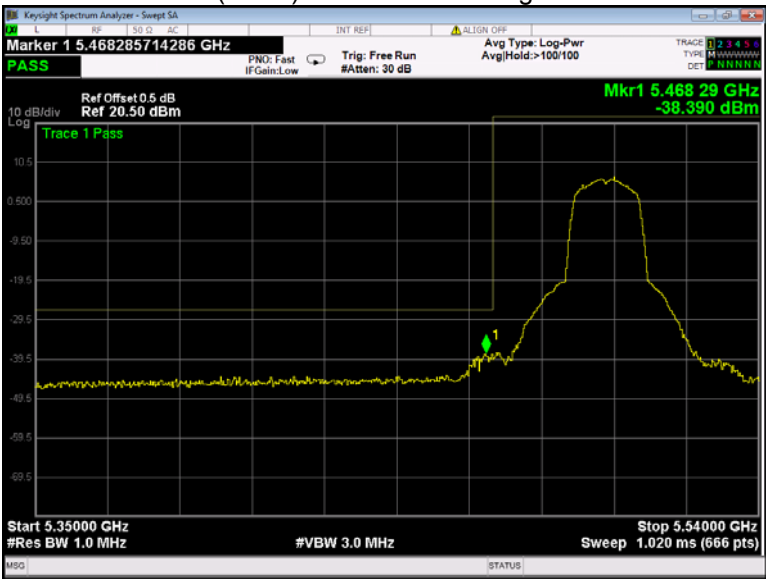
802.11n(HT20) U-NII-2A Band edge-left side



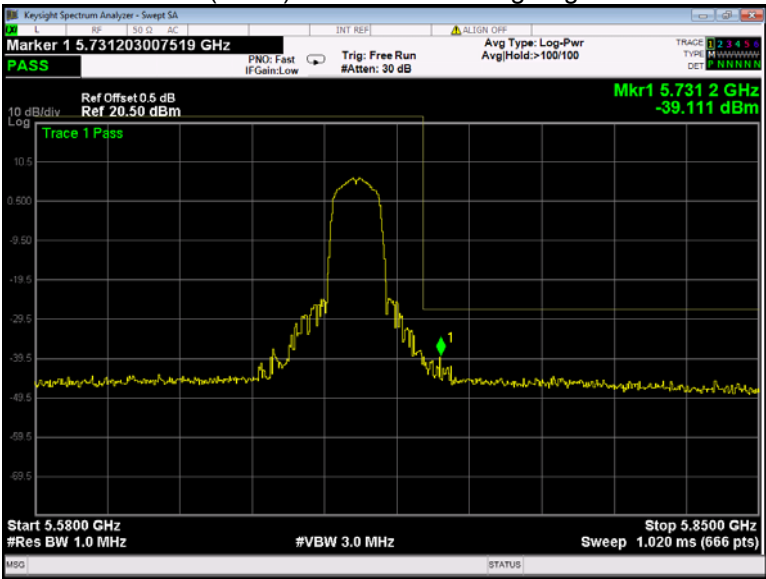
802.11n(HT20) U-NII-2A Band edge-right side



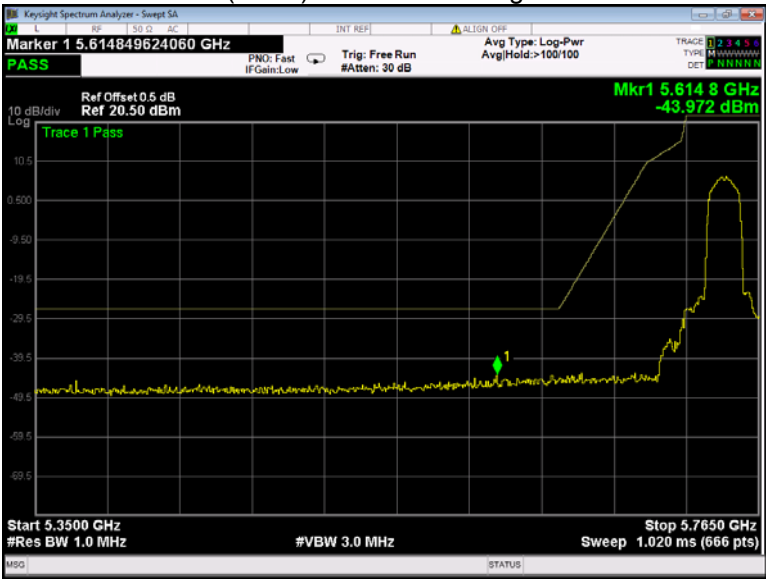
802.11n(HT20) U-NII-2C Band edge-left side



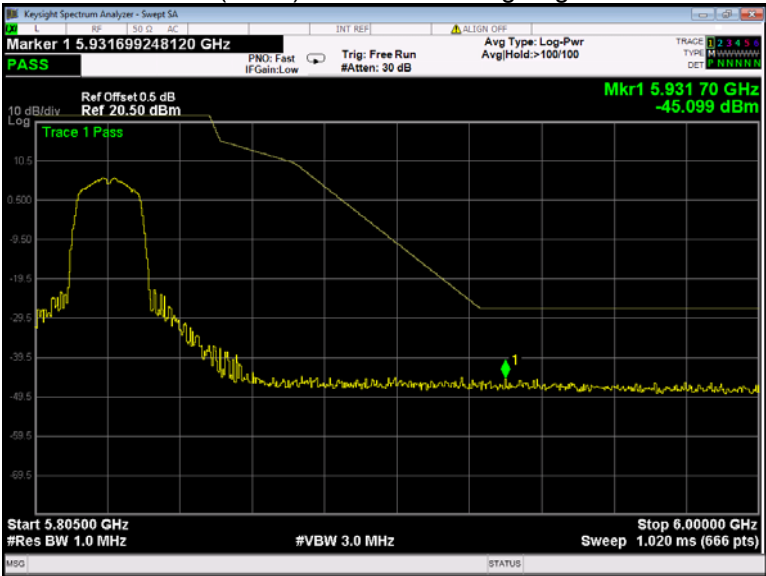
802.11n(HT20) U-NII-2C Band edge-right side



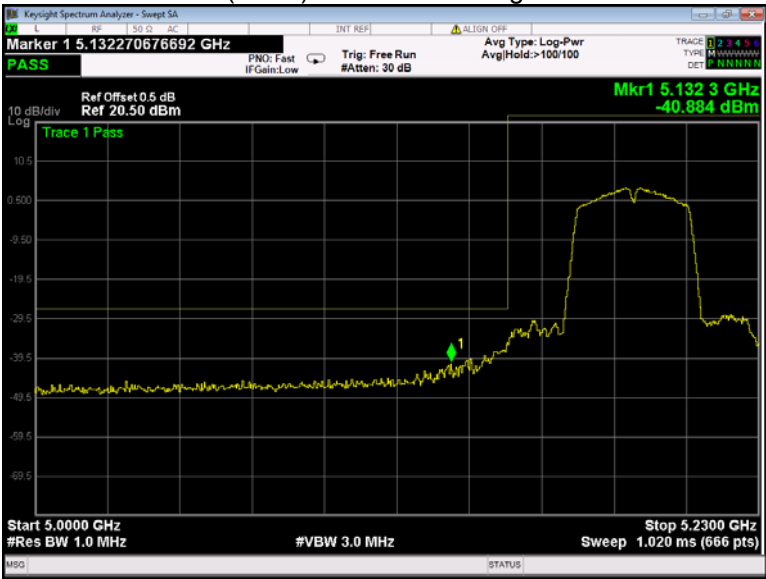
802.11n(HT20) U-NII-3 Band edge-left side



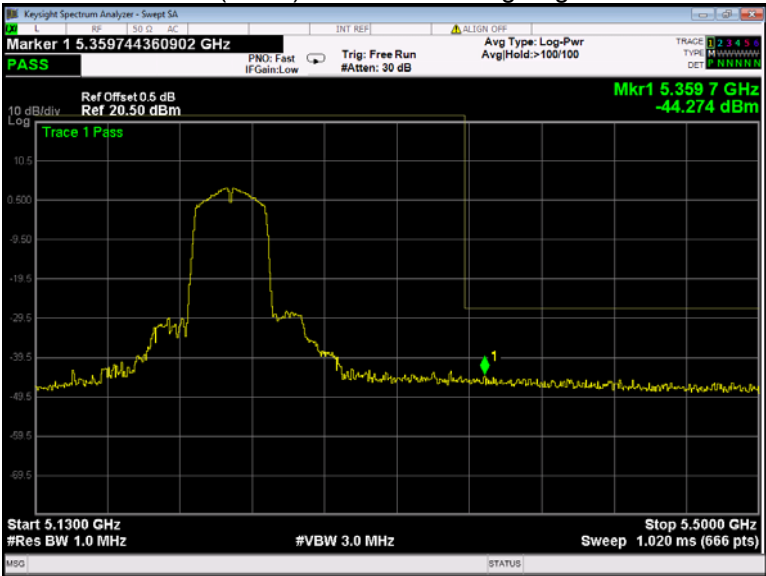
802.11n(HT20) U-NII-3 Band edge-right side



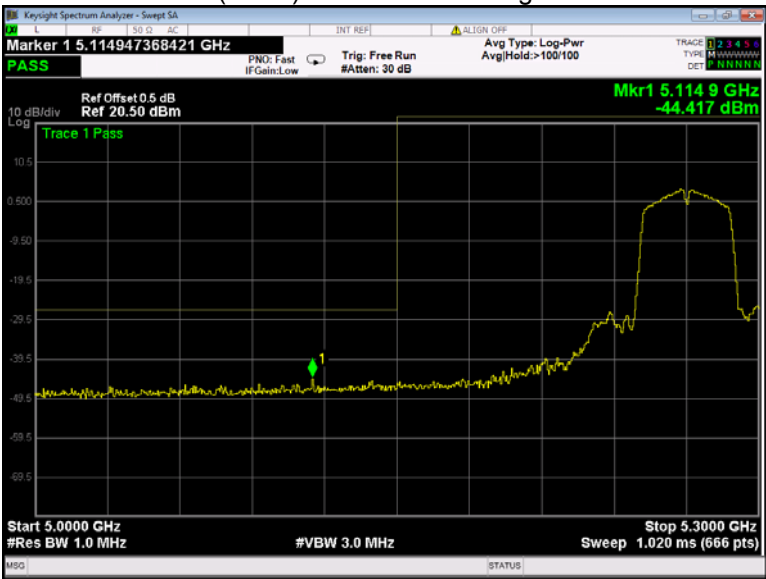
802.11n(HT40) U-NII-1 Band edge-left side



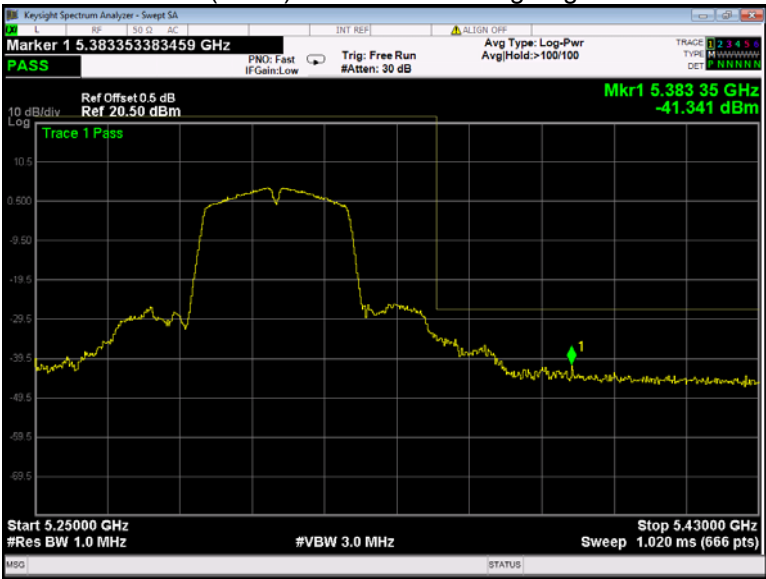
802.11n(HT40) U-NII-1 Band edge-right side



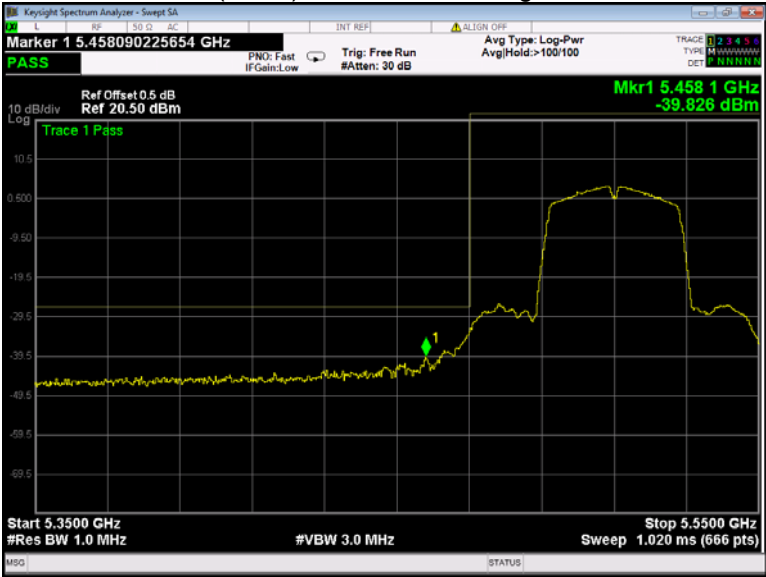
802.11n(HT40) U-NII-2A Band edge-left side



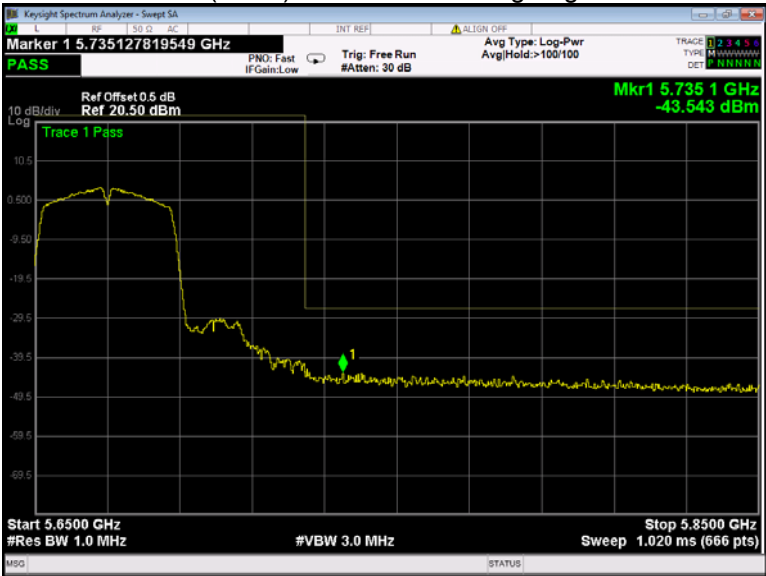
802.11n(HT40) U-NII-2A Band edge-right side



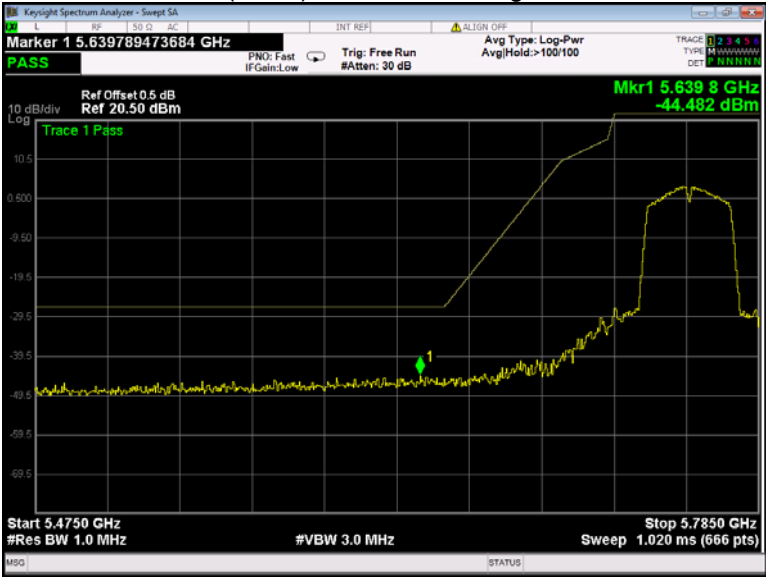
802.11n(HT40) U-NII-2C Band edge-left side



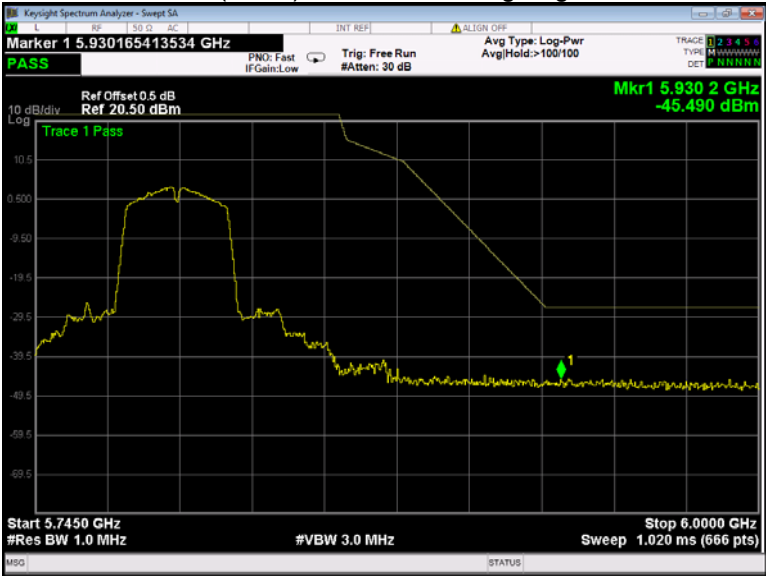
802.11n(HT40) U-NII-2C Band edge-right side



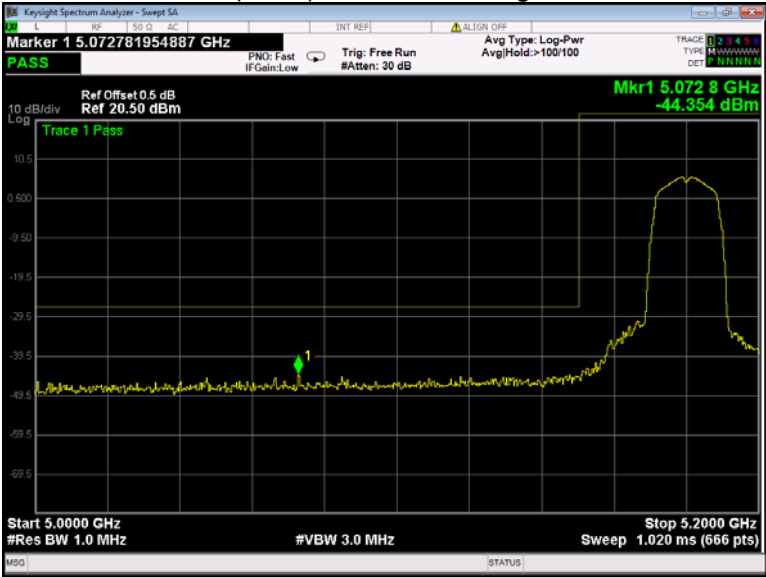
802.11n(HT40) U-NII-3 Band edge-left side



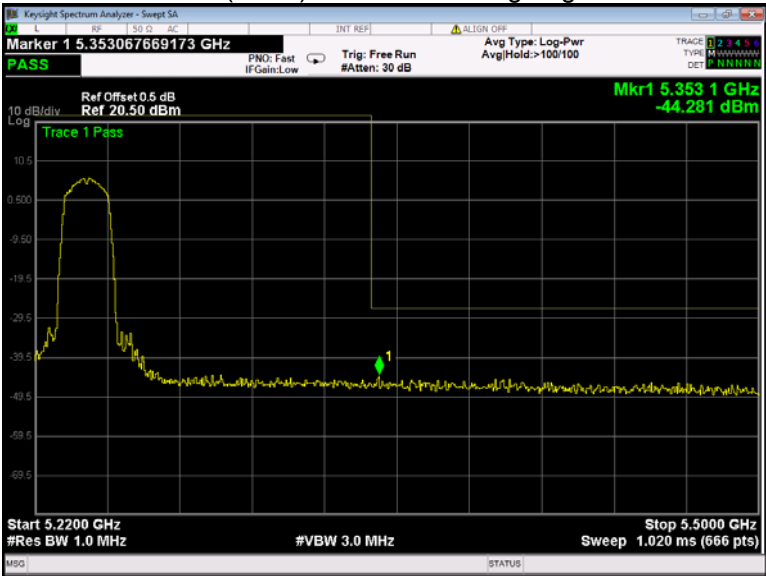
802.11n(HT40) U-NII-3 Band edge-right side



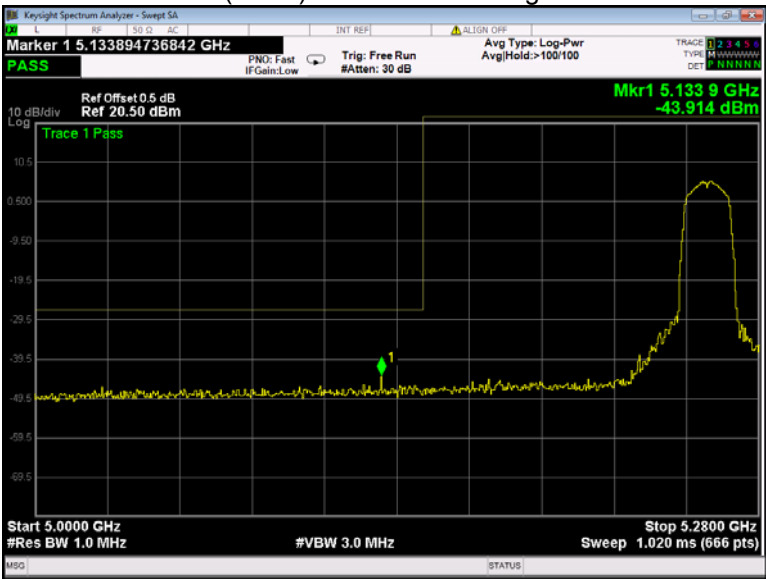
802.11ac(HT20) U-NII-1 Band edge-left side



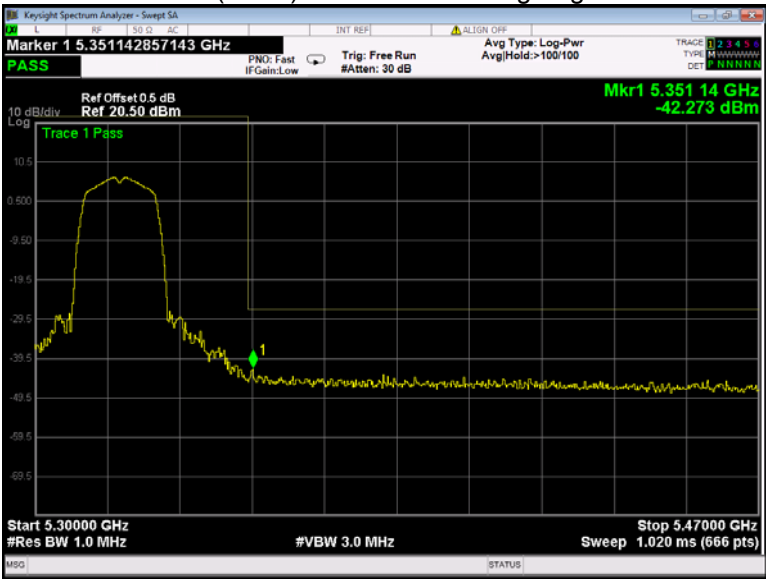
802.11ac(HT20) U-NII-1 Band edge-right side



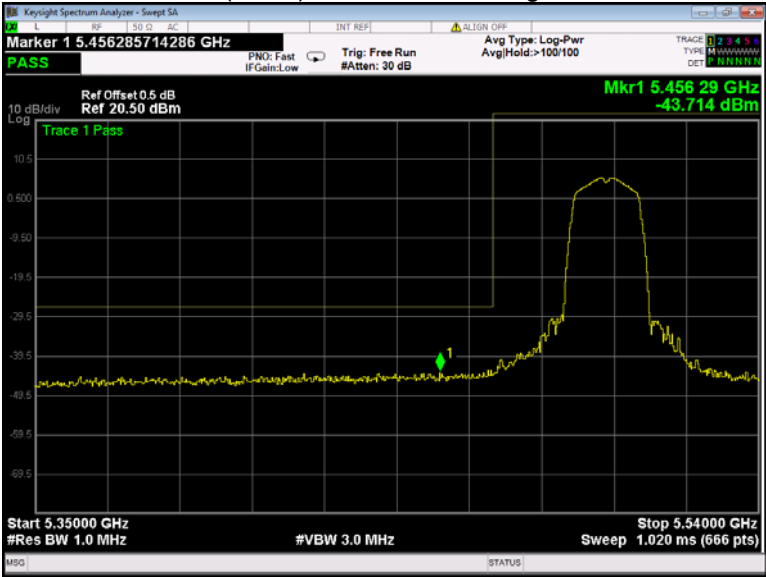
802.11ac(HT20) U-NII-2A Band edge-left side



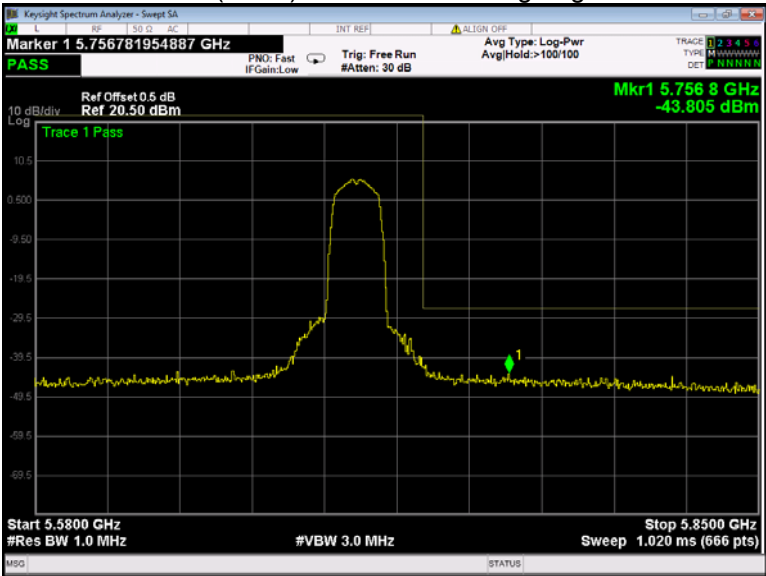
802.11ac(HT20) U-NII-2A Band edge-right side



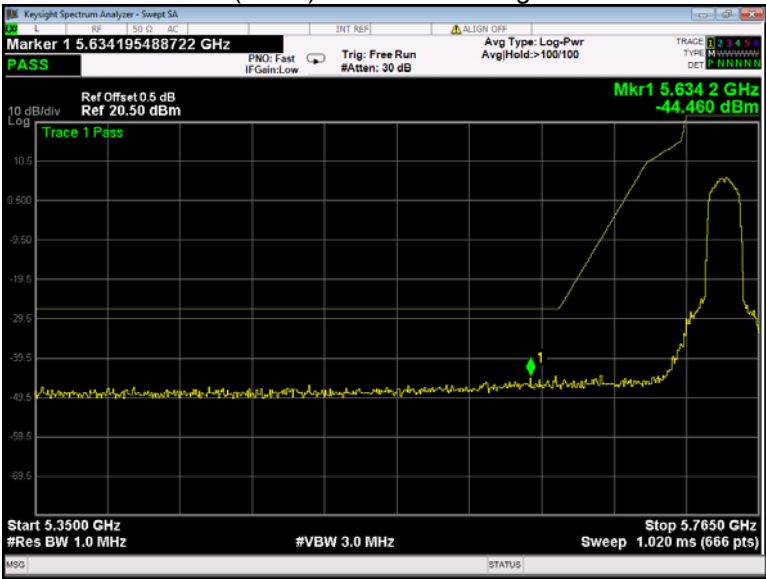
802.11ac(HT20) U-NII-2C Band edge-left side



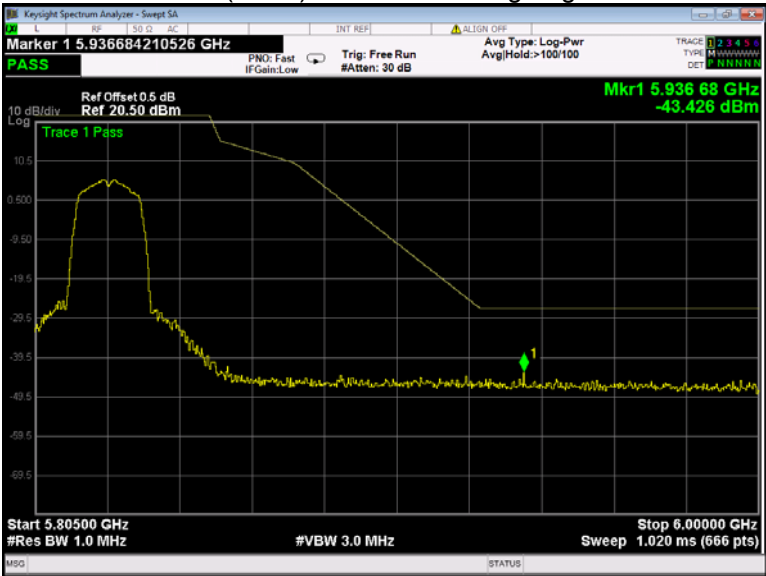
802.11ac(HT20) U-NII-2C Band edge-right side



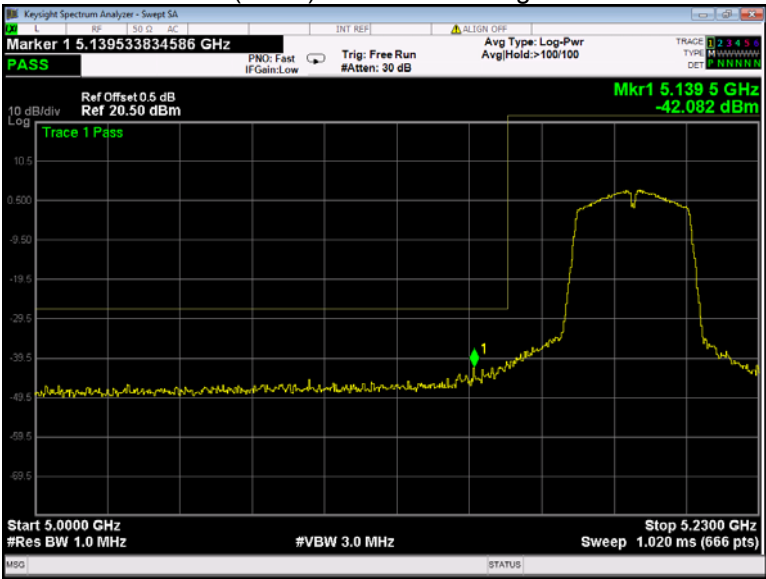
802.11ac(HT20) U-NII-3 Band edge-left side



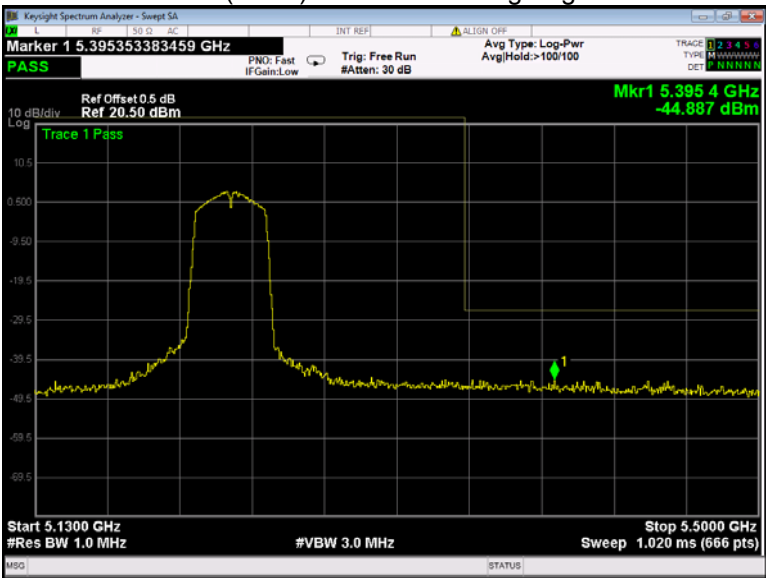
802.11ac(HT20) U-NII-3 Band edge-right side



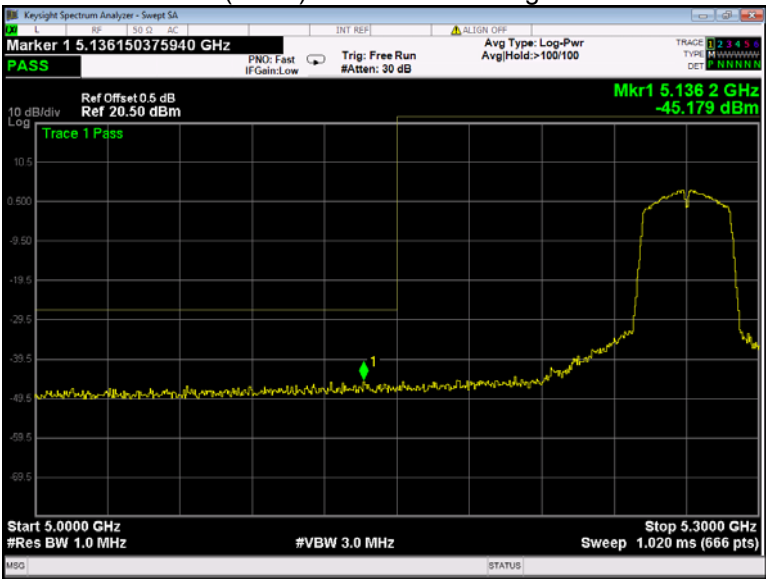
802.11ac(HT40) U-NII-1 Band edge-left side



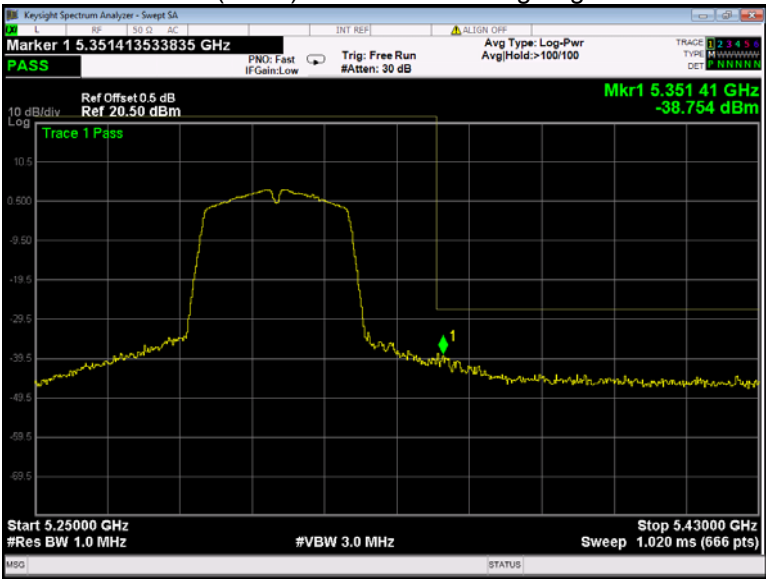
802.11ac(HT40) U-NII-1 Band edge-right side



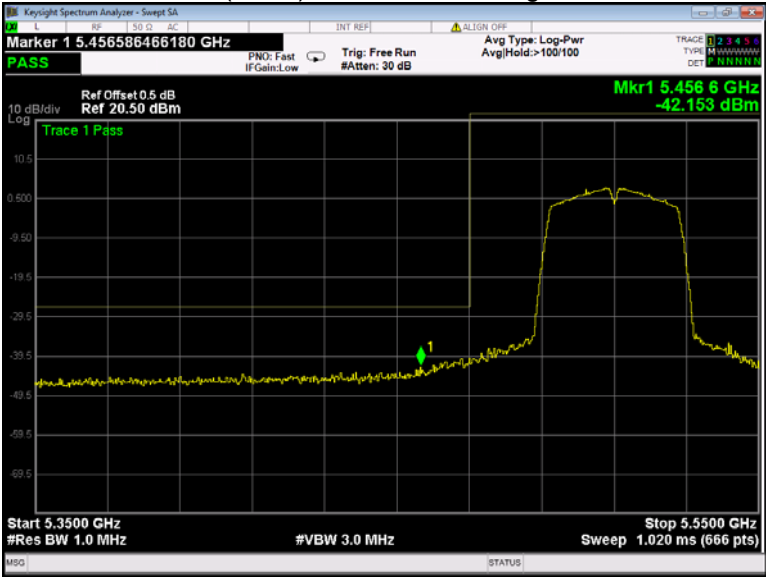
802.11ac(HT40) U-NII-2A Band edge-left side



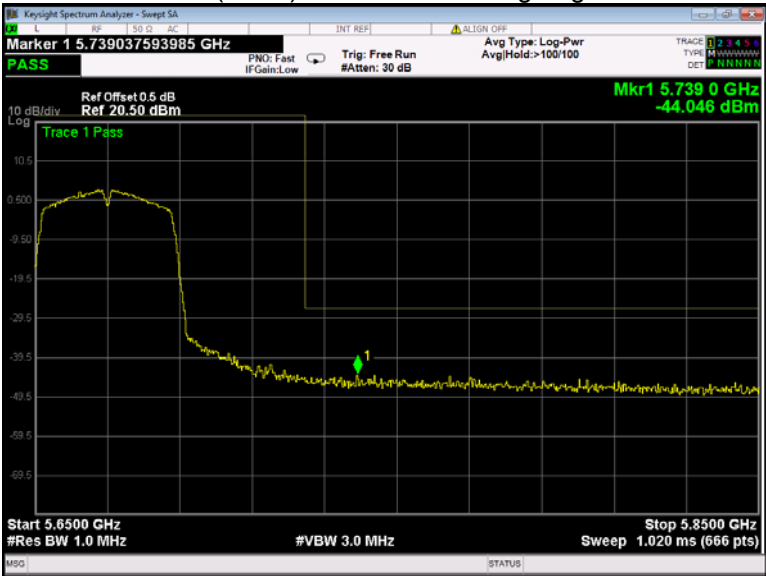
802.11ac(HT40) U-NII-2A Band edge-right side



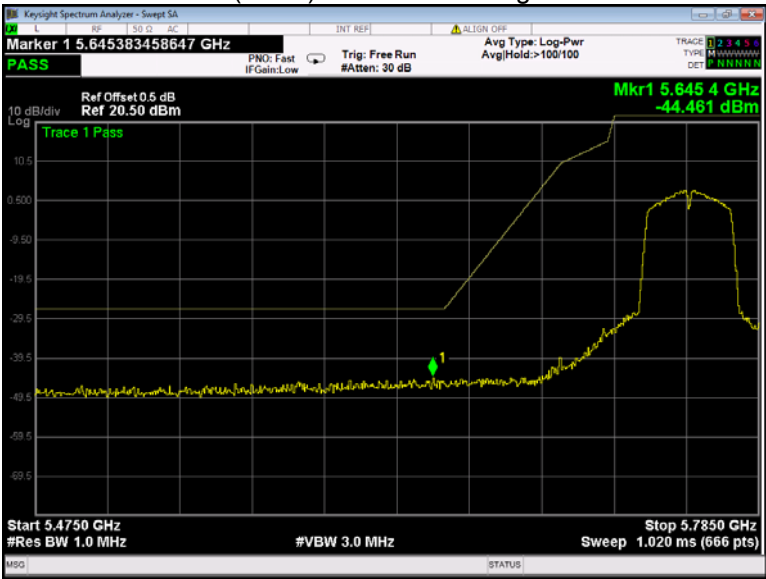
802.11ac(HT40) U-NII-2C Band edge-left side



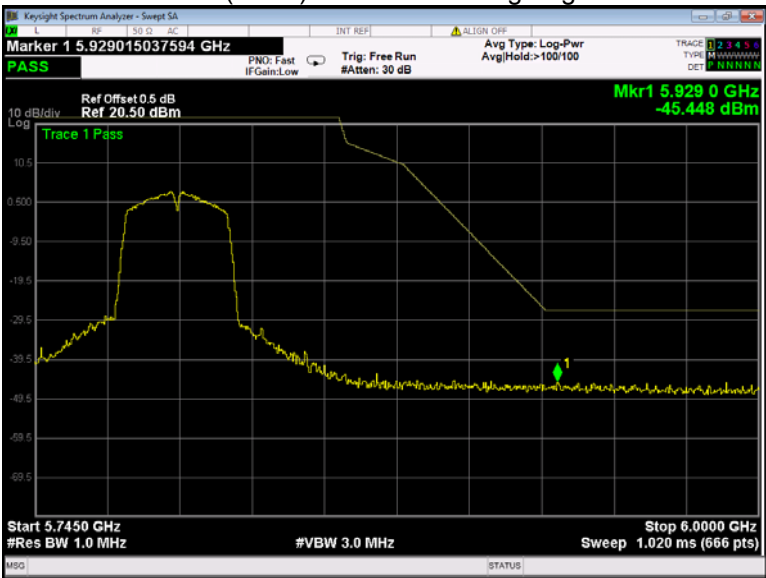
802.11ac(HT40) U-NII-2C Band edge-right side



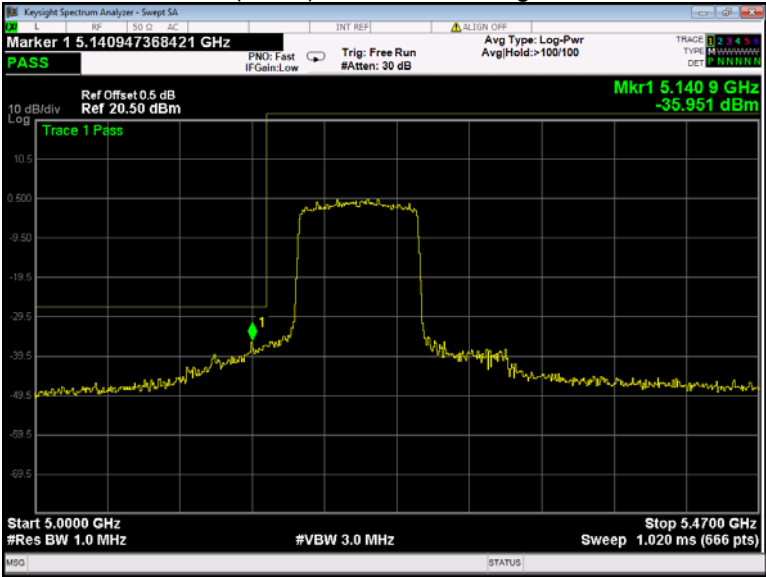
802.11ac(HT40) U-NII-3 Band edge-left side



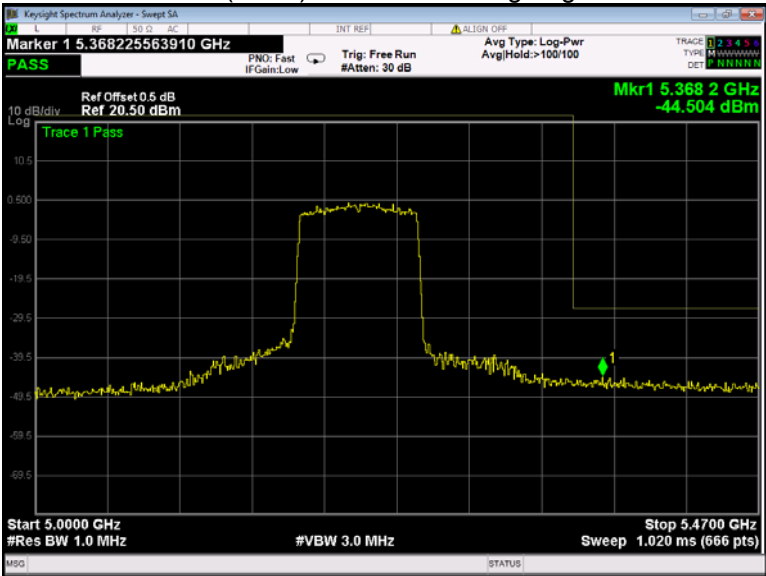
802.11ac(HT40) U-NII-3 Band edge-right side



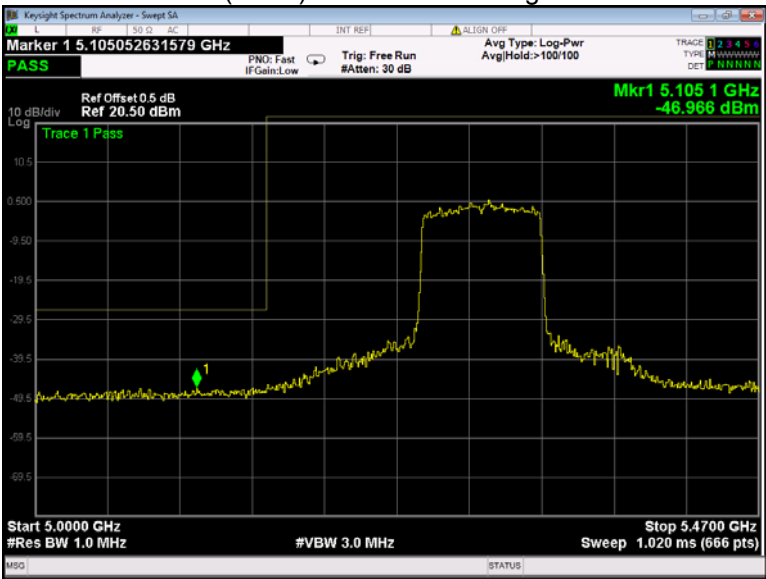
802.11ac(HT80) U-NII-1 Band edge-left side



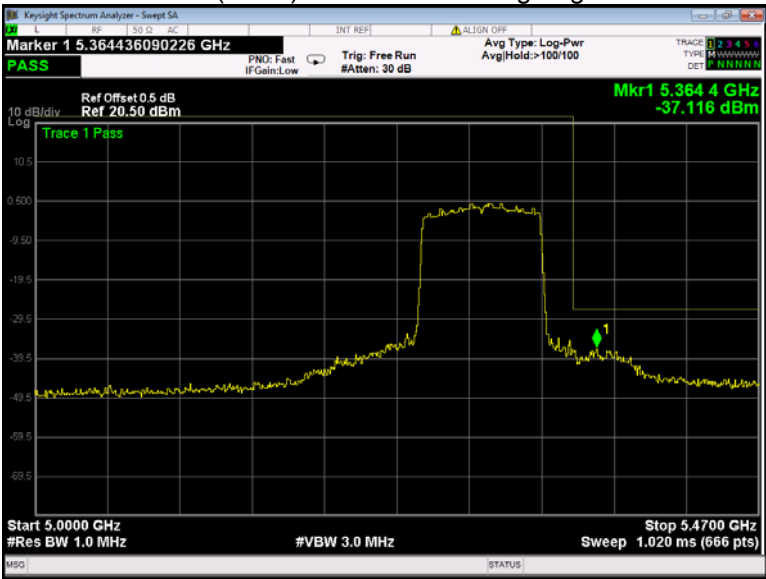
802.11ac(HT80) U-NII-1 Band edge-right side



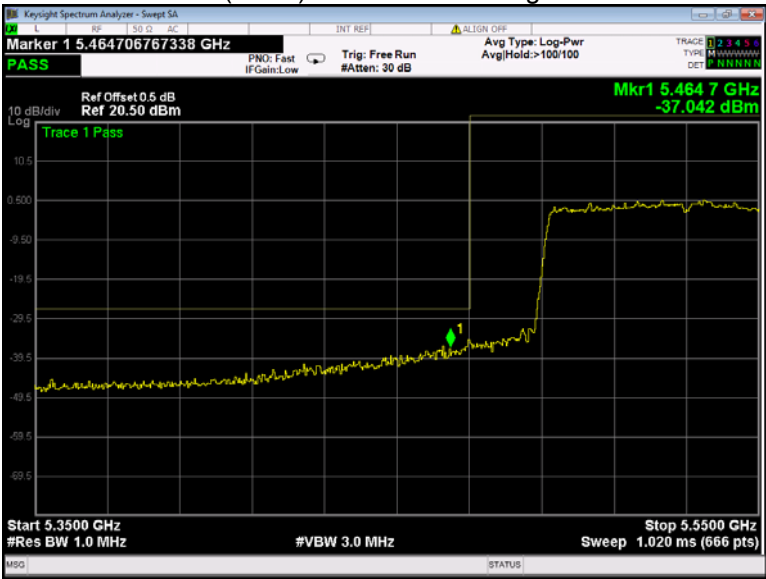
802.11ac(HT80) U-NII-2A Band edge-left side



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

