RF TEST REPORT

Report No.:	SET2019-07581
Product Name:	MIGU BOX
FCC ID:	2ATTHMGV2002
Model No. :	MGV2002
Applicant:	Migu Video Co.,Ltd.
Address:	No.636 Qiaoyun Road, Shanghai, China.
Dates of Testing:	06/01/2019 —06/26/2019
Issued by:	CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.
Lab Location:	Building 28/29, East of Shigu, Xili Industrial Zone, Xili Road, Nanshan District, Shenzhen, Guangdong, China. **Tel:** 86 755 26627338 **Fax:** 86 755 26627238

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Test Report

Product Name ..... :	MIGU BOX
Brand Name ..... :	N.A
Trade Name ..... :	MIGU
Applicant ..... :	Migu Video Co.,Ltd
Applicant Address ..... :	No.636 Qiaoyun Road, Shanghai, China.
Manufacturer ..... :	Migu Video Co.,Ltd
Manufacturer Address ..... :	No.636 Qiaoyun Road, Shanghai, China.
Test Standards ..... :	47 CFR Part 15 Subpart E 15.407
Test Result ..... :	PASS

Tested by ..... : Robin Luo 2019.06.27

Robin Luo, Test Engineer

Reviewed by..... : Chris You 2019.06.27

Chris You, Senior Engineer

Approved by ..... : Shuangwen Zhang 2019.06.27

Shuangwen Zhang, Manager

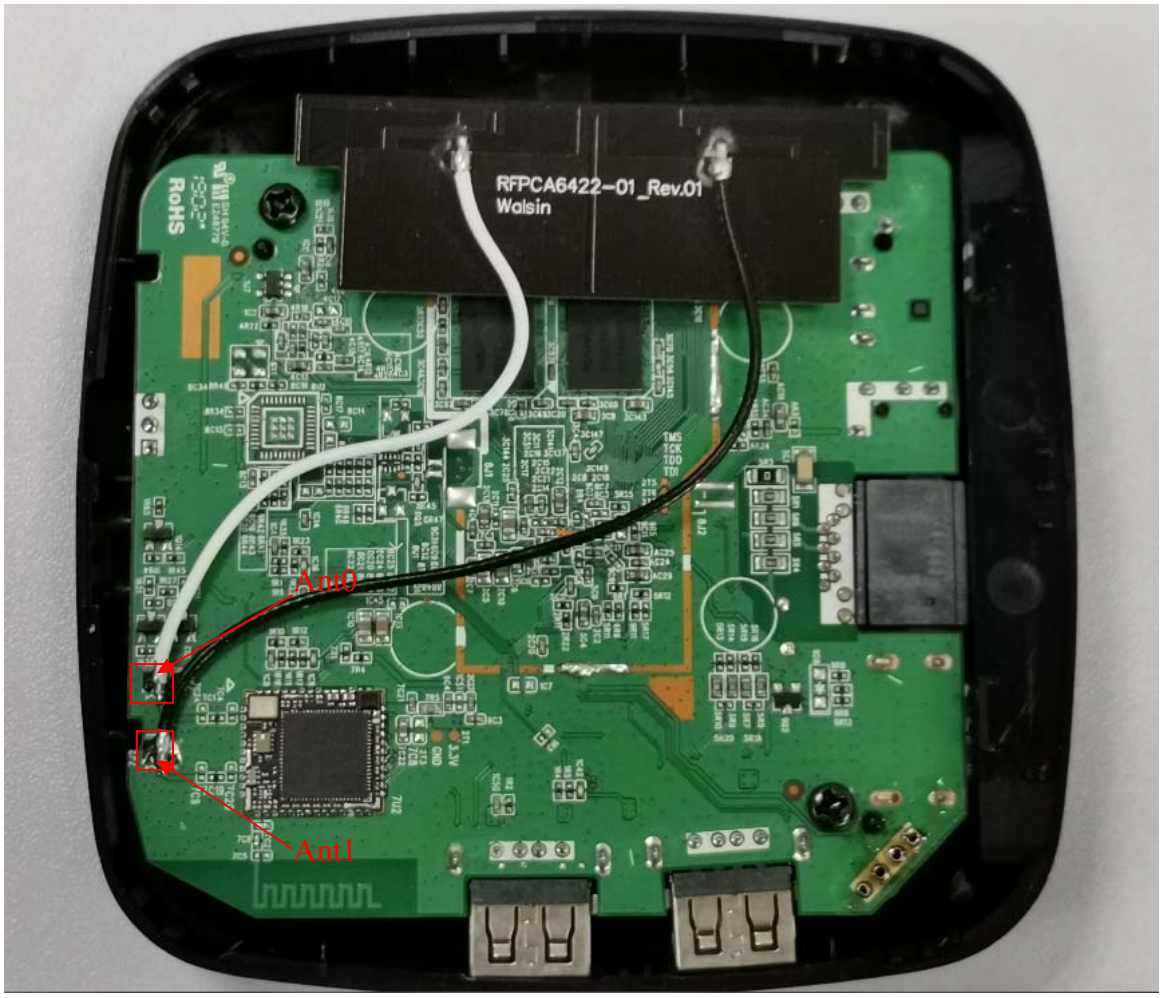
TABLE OF CONTENTS

Change History		
Issue	Date	Reason for change
1.0	2019.06.27	First edition

1. General Information

1.1. EUT Description

EUT Type	MIGU BOX
EUT supports Radios application	WLAN5.0GHz 802.11a/n (HT20/40)/ac(VHT20/40/80)
Product Type	Indoor
Modulation Type	CCK, DQPSK, DBPSK for DSSS 256QAM, 64QAM,16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6 Mbps(SISO) 802.11n : up to 135 Mbps(MIMO) 802.11ac: up to V9(MIMO)
Frequency Range	Band UNII-1: 5150 ~ 5250MHz Band UNII-3: 5725 ~ 5850MHz
Channel Bandwidth	802.11a: 20MHz, 802.11n: 20MHz/40MHz 802.11ac: 20MHz/40MHz/80MHz
Channel Number	5150 MHz ~ 5250MHz/5725 MHz ~ 5850MHz:4/5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 2 for 802.11n (HT40), 802.11ac(VHT40), 1 for 802.11ac (VHT80)
Antenna Type	Internal
Antenna Gain	Antenna 1/2: 2dBi
Output Power (Max.)	Band UNII-1: 14.76dBm Band UNII-3: 15.44dBm



Frequency	Modulation Mode	TX / RX Function
5.0GHz	802.11a	1TX / 1RX
	802.11n (HT20)	1TX / 1RX or 2TX / 2RX
	802.11n (HT40)	1TX / 1RX or 2TX / 2RX
	802.11ac (VHT20)	1TX / 1RX or 2TX / 2RX
	802.11ac (VHT40)	1TX / 1RX or 2TX / 2RX
	802.11ac (VHT80)	1TX / 1RX or 2TX / 2RX

1.2. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart E for the EUT FCC Certification:

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E § 15.407	Radio Frequency Devices
2	KDB Publication 789033D02v01	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
6	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Test detailed items/section required by FCC rules, and results are as below:

No.	FCC Rule	Description	Result
1	15.203	Antenna Requirement	PASS
2	15.407(a)	Maximum Conducted Output Power	PASS
3	15.407(a)	Emission Bandwidth（26 dB Bandwidth）	PASS
	15.407(e)	Emission Bandwidth（6 dB Bandwidth）	PASS
4	15.407(a)	Power spectral density (PSD)	PASS
5	15.207	AC Power Line Conducted Emission	PASS
6	15.209 15.407(b)	Radiated Band Edges and Spurious Emission	PASS
7	15.407(g)	Frequency Stability	PASS

1.3. Table for Supporting Units

No.	Equipment	Brand Name	Model Name	Manufacturer	Serial No.	Note
1	Notebook	DELL	PP11L	DELL	H5914A03	FCC DOC

1.4. Channel List

Operated band in 5150 MHz ~ 5250MHz

4 channels are provided for 802.11a, 802.11n-HT20, and 802.11ac-VHT20

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n-HT40 and 802.11ac-VHT40

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel are provided for 802.11ac-VHT80

Channel	Frequency	Channel	Frequency
42	5210 MHz	/	/

Operated band in 5725 MHz ~ 5850MHz

5 channels are provided for 802.11a, 802.11n-HT20 and 802.11ac-VHT20

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz	/	/

2 channels are provided for 802.11n-HT40 and 802.11ac-VHT40

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel are provided for 802.11ac-VHT80

Channel	Frequency	Channel	Frequency
155	5775 MHz	/	/

1.5. Test environment and mode

Operating Environment	
Temperature	24℃
Humidity	57 % RH
Atmospheric Pressure	1010 mbar
Test mode：	
Continuously transmitting mode	Keeps the EUT in 100% duty cycle transmitting with modulation in SISO/MIMO, duty cycle factor is not required.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

For Frequency band 5150 ~ 5250 MHz			
Mode	Modulation scheme / bandwidth		
	5180 MHz	5220 MHz	5240 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n/ac – HT20	MCS 0	MCS 0	MCS 0
Frequency	5190 MHz		5230 MHz
802.11n/ac – HT40	MCS 0		MCS 0
Frequency	5210 MHz		
802.11ac – VHT80	MCS 0		
For Frequency band 5725 ~ 5850 MHz			
Mode	Modulation scheme / bandwidth		
	5745 MHz	5785 MHz	5825 MHz
802.11a	6 Mbps	6 Mbps	6 Mbps
802.11n/ac – HT20	MCS 0	MCS 0	MCS 0
Frequency	5755 MHz		5795 MHz
802.11n/ac – HT40	MCS 0		MCS 0
Frequency	5775 MHz		
802.11ac – VHT80	MCS 0		

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation modes or test configuration modes mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 5	TX AC40 Mode / CH38, CH46 (UNII-1)
Mode 6	TX AC80 Mode / CH42 (UNII-1)
Mode 7	TX A Mode / CH149, CH157, CH165 (UNII-3)
Mode 8	TX N20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 9	TX N40 Mode / CH151, CH159 (UNII-3)
Mode 10	TX AC20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 11	TX AC40 Mode / CH151, CH159 (UNII-3)
Mode 12	TX AC80 Mode / CH155 (UNII-3)
Mode 13	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 13	TX Mode

For Radiated Test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH44, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC20 Mode / CH36, CH44, CH48 (UNII-1)
Mode 5	TX AC40 Mode / CH38, CH46 (UNII-1)
Mode 6	TX AC80 Mode / CH42 (UNII-1)
Mode 7	TX A Mode / CH149, CH157, CH165 (UNII-3)
Mode 8	TX N20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 9	TX N40 Mode / CH151, CH159 (UNII-3)
Mode 10	TX AC20 Mode / CH149, CH157, CH165 (UNII-3)
Mode 11	TX AC40 Mode / CH151, CH159 (UNII-3)
Mode 12	TX AC80 Mode / CH155 (UNII-3)

1.6. Power level setup in software

Power level setup in software for 5G wifi			
UNII-1（Antenna 0）			
Frequency（MHz）	5180	5220	5240
A mode	26	26	26
Frequency（MHz）	5180	5220	5240
N20 mode	20	20	20
Frequency（MHz）	5190	5230	\
N40 mode	20	20	\
Frequency（MHz）	5180	5220	5240
AC20 mode	20	20	20
Frequency（MHz）	5190	5230	\
AC40 mode	20	20	\
Frequency（MHz）	5210	\	\
AC80 mode	24	\	\

Power level setup in software for 5G wifi			
UNII-1（Antenna 1）			
Frequency（MHz）	5180	5220	5240
A mode	26	26	26
Frequency（MHz）	5180	5220	5240
N20 mode	20	20	20
Frequency（MHz）	5190	5230	\
N40 mode	20	20	\
Frequency（MHz）	5180	5220	5240
AC20 mode	20	20	20
Frequency（MHz）	5190	5230	\
AC40 mode	20	20	\
Frequency（MHz）	5210	\	\
AC80 mode	24	\	\

Power level setup in software for 5G wifi			
UNII-3（Antenna 0）			
Frequency（MHz）	5745	5785	5825
A mode	1C	1C	1C
Frequency（MHz）	5745	5785	5825
N20 mode	18	18	18
Frequency（MHz）	5755	5795	\
N40 mode	18	18	\
Frequency（MHz）	5745	5785	5825
AC20 mode	18	18	18
Frequency（MHz）	5755	5795	\
AC40 mode	18	18	\
Frequency（MHz）	5775	\	\
AC80 mode	1C	\	\

Power level setup in software for 5G wifi			
UNII-3（Antenna 1）			
Frequency（MHz）	5745	5785	5825
A mode	1C	1C	1C
Frequency（MHz）	5745	5785	5825
N20 mode	18	18	18
Frequency（MHz）	5755	5795	\
N40 mode	18	18	\
Frequency（MHz）	5745	5785	5825
AC20 mode	18	18	18
Frequency（MHz）	5755	5795	\
AC40 mode	18	18	\
Frequency（MHz）	5775	\	\
AC80 mode	1C	\	\

1.7. Laboratory Facilities

FCC-Registration No.: CN5031

CCIC Southern Electronic Product Testing (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. Designation Number: CN5031, valid time is until December 31, 2019.

ISED Registration: 11185A-1

CAB identifier:CN0064

CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A-1 on Aug. 04, 2016, valid time is until Dec. 31, 2019.

NVLAP Lab Code: 201008-0

CCIC-SET is a third party testing organization accredited by NVLAP according to ISO/IEC 17025. The accreditation certificate number is 201008-0.

2. 47 CFR Part 15E Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

And according to FCC 47 CFR Section 15.407(E), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.1.2. Antenna Information

Antenna System	Cyclic Delay Diversity(CDD)
	2 antennas are correlated with each other
Antenna Type	PCB

2.1.3. Antenna Gain

Antenna	Gain(dBi)
0	2
1	2
0+1	5.01

Note: 1. for 802.11n/ac mode, antenna 0, 1 can transmit/receive simultaneously (MIMO mode), for 802.11a, both antennas 0, 1 can transmit/receive at single mode (SISO mode)

2. Directional gain = G_{ANT} + 10log (N_{ANT}) dBi

2.1.4. Result: comply

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

2.2. Output Power

2.2.1. Limit of Output Power

FCC 15.407(a)

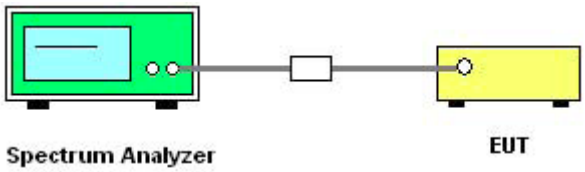
The maximum conducted output power should not exceed:

Band	EUT Category	Limit
U-NII-1	☐Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≤ 125mW(21dBm) at any elevation angle above 30 degrees as measured from the horizon)
	☐Fixed point-to-point Access device	1 Watt (30 dBm)
	☐Indoor Access Point	1 Watt (30 dBm)
	☒Mobile and portable client device	250mW (24 dBm)
U-NII-2A	☐	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-2C	☐	250mW (24 dBm) or 11dBm+10logB* Whichever is less.
U-NII-3	☒	1 Watt (30 dBm)
Note: B* is the 26 dB emission bandwidth in MHz.		

2.2.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.2.3. Test Setup



2.2.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02 Method SA-1

2. The RF output of EUT was connected to spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. Set RBW=1MHz, VBW=3MHz, Sweep time=Auto, Detector=average (RMS), Compute power by integrating the spectrum across the 99%OBW.

5. Measure the conducted output power and record the results in the test report.

2.2.5. Test Result

Please refer to APPENDIX A for detail

2.3. Emission Bandwidth

2.3.1. Limit of Bandwidth

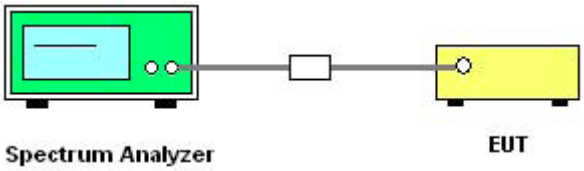
There is no limit bandwidth for bandU-NII-1, U-NII-2A and U-NII-2C.

The minimum of 6dB bandwidth measurement is 0.5 MHz for U-NII-3.

2.3.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.3.3. Test Setup



2.3.4. Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02.

2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. For 26dB bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = approximately 1%EBW, VBW≥3RBW , Detector = Peak, Trace mode = max hold

Span ＞26 dB bandwidth and Sweep time = auto

5. Use the spectrum analyzer N dB down function to find the 26dB bandwidth.

6. For 6 Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) =100kHz VBW = 300 kHz, Detector = Peak, Trace mode = max hold

7. Use the spectrum analyzer N dB down function to find the 6dB bandwidth

8. Measure and record the worst results in the test report.

2.3.5. Test Results Bandwidth

Please refer to APPENDIX A for detail

2.4. Power spectral density (PSD)

2.4.1. Limit of Power Spectral Density

FCC 15.407(a)

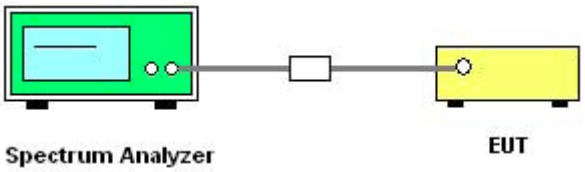
The maximum power spectral density should not exceed:

Band	EUT Category	Limit
U-NII-1	☐Access Point (Master device)	17 dBm/MHz
	☐Fixed point-to-point Access device	
	☒Mobile and portable client device	11 dBm/MHz
U-NII-2A	☐	11 dBm/MHz
U-NII-2C	☐	11 dBm/MHz
U-NII-3	☒	30dBm/500kHz

2.4.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.4.3. Test Setup



2.4.4. Test Procedures

1. Place the EUT on the table and set it in transmitting mode.

2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02.

3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.

4. **For U-NII-1, U-NII-2A, U-NII-2C Band:**

Using method SA-1

Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = sample, traces 100 sweeps of averaging mode.

For U-NII-3 Band:

Set RBW=500 kHz, VBW≥ 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto, detector = sample, traces 100 sweeps of averaging mode.

5.Use peak search function on the instrument to find the peak of the spectrum and record its value

6. Repeat above procedures until all default test channel (low, middle, and high) was complete.

2.4.5. Test Results of Power spectral density

Please refer to APPENDIX A for detail

2.5. Frequency Stability

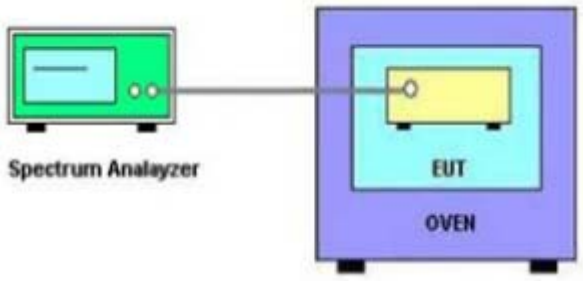
2.5.1. Limit

FCC 15.407(b) Frequency Stability	
Frequency Band(MHz)	Limit
5150~5250	Specified in the user's manual
5250~5350	
5470~5725	
5725~5850	

2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.5.3. Test Setup



2.5.4. Test Procedures

1. The EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

2. Set to the maximum power setting and enable the EUT transmit continuously.

3. The EUT is installed in an environment test chamber with external power source.

4. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.

5. A sufficient stabilization period at each temperatures in used prior to each frequency measurement.

6. The test shall be performed under -10 to 55 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

7. Measure and record the worst results in the test report.

2.5.5. Test Results of Frequency Stability

Please refer to APPENDIX A for detail

2.6. Radiated Band Edge and Spurious Emission

2.6.1. Limit of Radiated Band Edges and Spurious Emission

Radiated emission which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedures New Rules v01	Field Strength at 3m	
	PK:74(dBμV/m)	AV:54 (dBμV/m)

Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dBμV/m)
5150 - 5250	Outside of the 5.15~5.35 GHz	-27	68.2
5250 - 5350	Outside of the 5.15~5.35 GHz		
5470 -5725	Outside of the 5.47~5.725 GHz		

FCC 15.407			
Frequency Band (MHz)	Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength (3m) (dBμV/m)
5725 - 5850	＜5650	-27	68.2
	5650~5700	-27~10	68.2~105.2
	5700~5720	10~15.6	105.2~110.8
	5720~5725	15.6~27	110.8~122.2
	5850~5855	27~15.6	122.2~110.8
	5855~5875	15.6~10	110.8~105.2
	5875~5925	10~-27	105.2~68.2
	＞5925	-27	68.2

Note: 1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

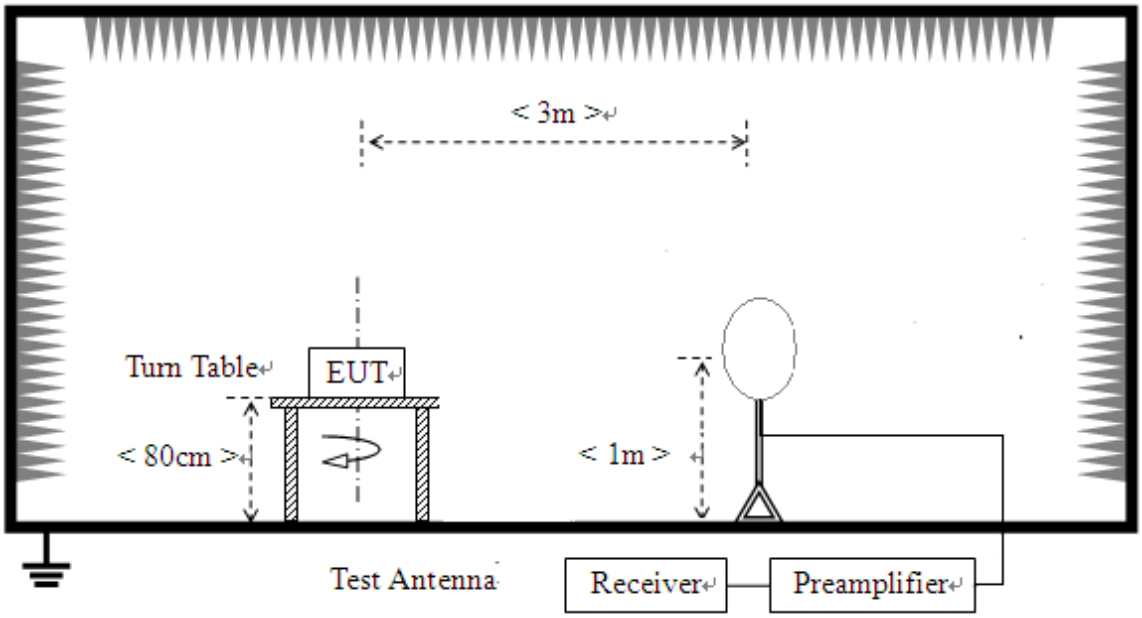
$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts).

2.6.2. Measuring Instruments

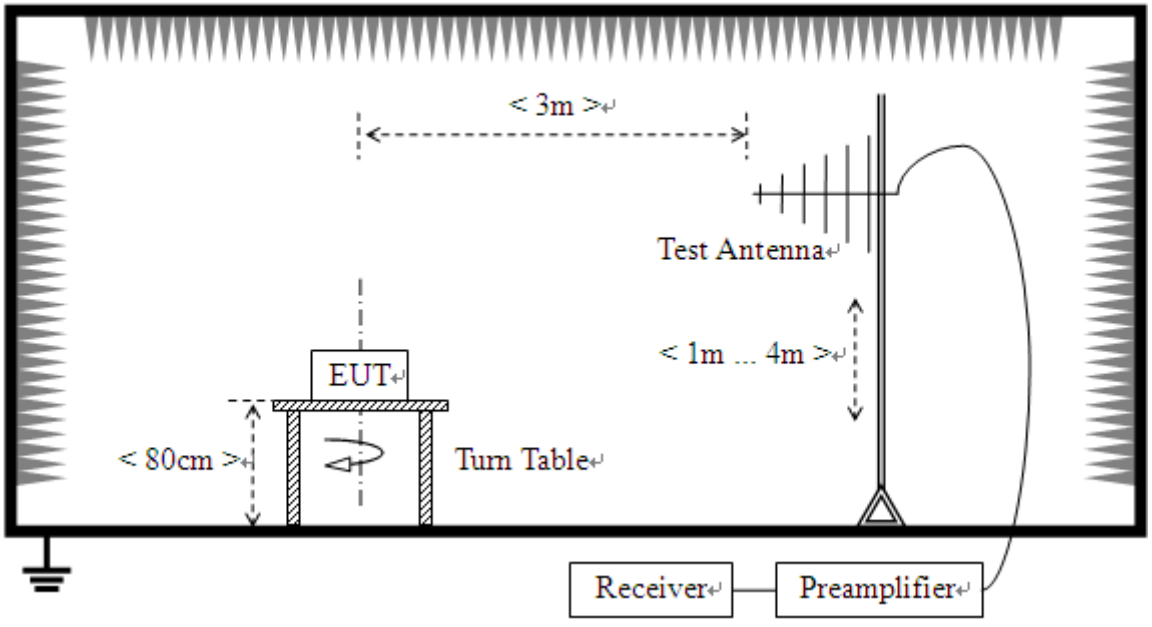
The measuring equipment is listed in the section 3 of this test report.

2.6.3. Test Setup

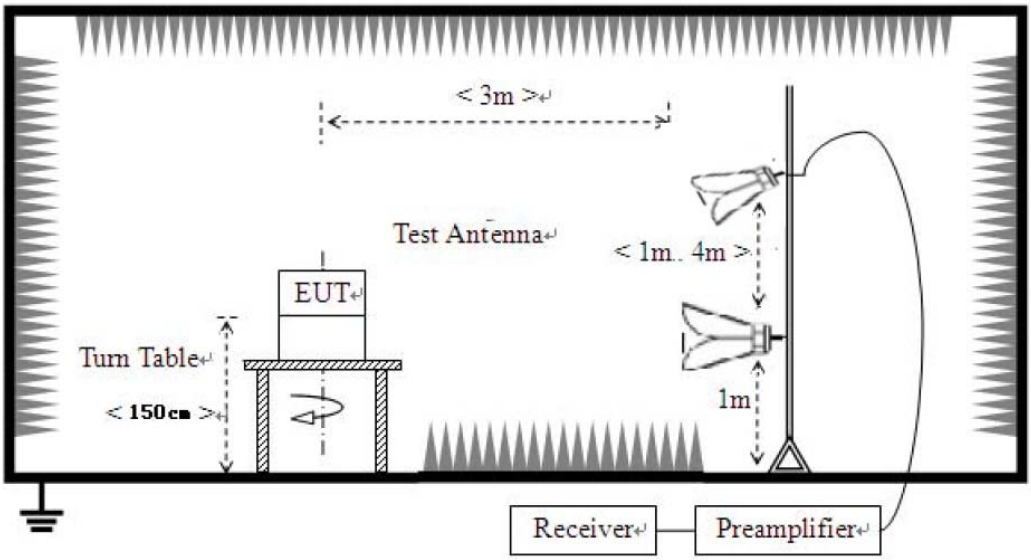
For radiated emissions from 9 KHz to 30 MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
6. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

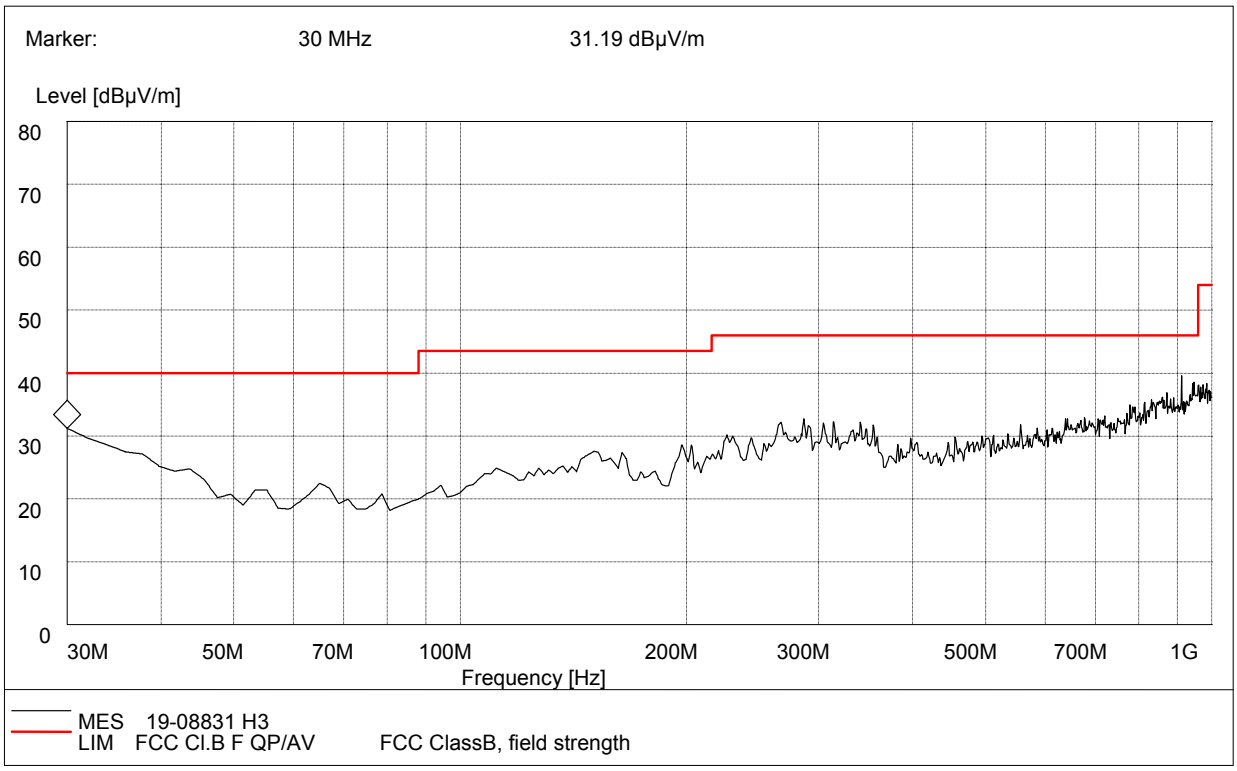
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. Only provide worst-Case mode data provide here, ANT0 for 11a and MIMO mode for 11n/11n(40M)/11ac/11ac(40M)/11ac(80M) for above 1GHz, 11n(40M) MIMO mode for Below 1GHz .

2.6.5. Test Results of Radiated Band Edge and Spurious Emission

For 9 KHz to 30MHz

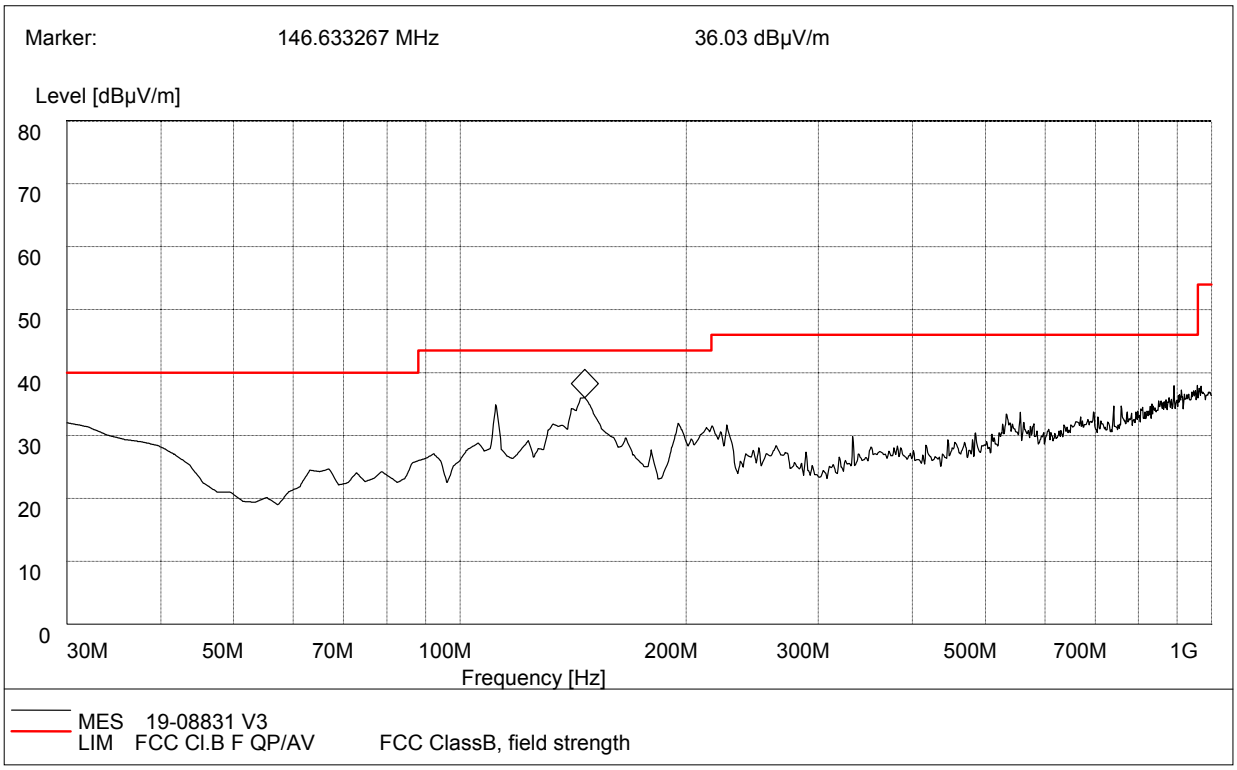
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

For 30MHz to 1000 MHz



30MHz to 1GHz, Antenna Horizontal

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµV/m)	Antenna	Verdict
30.00	31.19	120.000	200.0	40.00	Horizontal	Pass



30MHz to 1GHz, Antenna Vertical

Frequency (MHz)	QuasiPeak (dB µ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dB µ V/m)	Antenna	Verdict
146.633	36.03	120.000	200.0	40.0	Vertical	Pass

For 1GHz to 40 GHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5180MHz）ANT0									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	49.65	PK	68.20	-18.55	1.50	320	42.15	7.50
2	5150.00	39.35	AV	54.00	-14.65	1.50	320	31.85	7.50
3	10360.00	54.38	PK	68.20	-13.82	1.50	320	34.58	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5180MHz）ANT0									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	51.32	PK	68.20	-16.88	1.70	300	43.82	7.50
2	5150.00	41.08	AV	54.00	-12.92	1.70	300	33.58	7.50
3	10360.00	53.68	PK	68.20	-14.52	1.70	300	33.88	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	53.69	PK	68.20	-14.51	1.70	280	33.79	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.98	PK	68.20	-13.22	1.50	180	35.08	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.98	PK	68.20	-15.22	1.40	330	44.98	8.00
2	5350.00	42.63	AV	54.00	-11.37	1.40	330	34.63	8.00
3	10480.00	54.17	PK	68.20	-14.03	1.50	300	34.27	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.68	PK	68.20	-14.52	1.70	330	45.68	8.00
2	5350.00	43.54	AV	54.00	-10.46	1.70	330	35.54	8.00
3	10480.00	56.78	PK	68.20	-11.42	1.70	330	36.88	19.90

NTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	53.33	PK	68.20	-14.87	1.60	100	43.68	9.65
2	11490.00	55.48	PK	68.20	-12.72	1.60	100	33.78	21.70
3	11490.00	45.37	AV	54.00	-8.63	1.60	100	23.67	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	53.69	PK	68.20	-14.51	1.50	220	44.04	9.65
2	11490.00	55.19	PK	68.20	-13.01	1.50	220	33.49	21.70
3	11490.00	45.65	AV	54.00	-8.35	1.50	220	23.95	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	53.65	PK	68.20	-14.55	1.40	300	31.95	21.70
2	11570.00	43.97	AV	54.00	-10.03	1.40	300	22.27	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	55.32	PK	68.20	-12.88	1.50	280	33.62	21.70
2	11570.00	46.74	AV	54.00	-7.26	1.50	280	25.04	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11a_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	51.98	PK	68.20	-16.22	1.70	320	42.20	9.78
2	11650.00	55.24	PK	68.20	-12.96	1.70	300	33.34	21.90
3	11650.00	45.89	AV	54.00	-8.11	1.70	300	23.99	21.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11a_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.24	PK	68.20	-15.96	2.00	180	42.46	9.78
2	11650.00	54.78	PK	68.20	-13.42	2.00	180	32.88	21.90
3	11650.00	45.24	AV	54.00	-8.76	2.00	180	23.34	21.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5180MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	48.57	PK	68.20	-19.63	1.50	320	41.07	7.50
2	5150.00	38.27	AV	54.00	-15.73	1.50	320	30.77	7.50
3	10360.00	53.69	PK	68.20	-14.51	1.50	320	33.89	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5180MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	50.98	PK	68.20	-17.22	1.70	240	43.48	7.50
2	5150.00	40.74	AV	54.00	-13.26	1.70	240	33.24	7.50
3	10360.00	53.33	PK	68.20	-14.87	1.70	240	33.53	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	53.48	PK	68.20	-14.72	1.70	280	33.58	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.18	PK	68.20	-14.02	1.50	180	34.28	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.89	PK	68.20	-15.31	1.50	330	44.89	8.00
2	5350.00	42.54	AV	54.00	-11.46	1.50	330	34.54	8.00
3	10480.00	53.68	PK	68.20	-14.52	1.50	300	33.78	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.68	PK	68.20	-15.52	1.60	320	44.68	8.00
2	5350.00	42.54	AV	54.00	-11.46	1.60	320	34.54	8.00
3	10480.00	55.98	PK	68.20	-12.22	1.60	320	36.08	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	52.87	PK	68.20	-15.33	1.70	300	43.22	9.65
2	11490.00	54.98	PK	68.20	-13.22	1.70	300	33.28	21.70
3	11490.00	44.87	AV	54.00	-9.13	1.70	300	23.17	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	53.36	PK	68.20	-14.84	1.50	240	43.71	9.65
2	11490.00	54.87	PK	68.20	-13.33	1.50	240	33.17	21.70
3	11490.00	45.33	AV	54.00	-8.67	1.50	240	23.63	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	53.26	PK	68.20	-14.94	1.40	390	31.56	21.70
2	11570.00	43.58	AV	54.00	-10.42	1.40	390	21.88	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	54.69	PK	68.20	-13.51	1.40	300	32.99	21.70
2	11570.00	46.11	AV	54.00	-7.89	1.40	300	24.41	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n20_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.17	PK	68.20	-16.03	1.60	310	42.39	9.78
2	11650.00	54.87	PK	68.20	-13.33	1.60	310	32.97	21.90
3	11650.00	45.52	AV	54.00	-8.48	1.60	310	23.62	21.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n20_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.2	PK	68.20	-16	2.00	200	42.42	9.78
2	11650.00	53.68	PK	68.20	-14.52	2.00	200	31.78	21.90
3	11650.00	44.14	AV	54.00	-9.86	2.00	200	22.24	21.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_5190MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	50.32	PK	68.20	-17.88	1.60	300.00	42.82	7.50
2	5150.00	39.54	AV	54.00	-14.46	1.60	300.00	32.04	7.50
3	10380.00	56.36	PK	68.20	-11.84	1.60	300.00	36.56	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_5190MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	51.69	PK	68.20	-16.51	1.70	300.00	44.19	7.50
2	5150.00	41.71	AV	54.00	-12.29	1.70	300.00	34.21	7.50
3	10380.00	53.24	PK	68.20	-14.96	1.70	300.00	33.44	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_5230MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	54.21	PK	68.20	-13.99	1.50	360.00	46.21	8.00
2	5350.00	43.86	AV	54.00	-10.14	1.50	360.00	35.86	8.00
3	10460.00	56.85	PK	68.20	-11.35	1.50	360.00	36.95	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_5230MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.98	PK	68.20	-14.22	2.00	140.00	45.98	8.00
2	5350.00	43.84	AV	54.00	-10.16	2.00	140.00	35.84	8.00
3	10460.00	53.47	PK	68.20	-21.54	2.00	140.00	33.57	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_5755MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.98	PK	68.20	-13.22	1.70	300.00	45.33	9.65
2	5725.00	46.62	AV	54.00	-7.38	1.70	300.00	36.97	9.65
3	11510.00	55.24	PK	68.20	-12.96	1.70	300.00	33.54	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_5755MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	56.39	PK	68.20	-11.81	1.60	280.00	46.74	9.65
2	5725.00	45.74	AV	54.00	-8.26	1.60	280.00	36.09	9.65
3	11510.00	55.97	PK	68.20	-12.23	1.60	280.00	34.27	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11n40_5795MHz）									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	54.95	PK	68.20	-13.25	1.80	240.00	45.17	9.78
2	5850.00	44.21	AV	54.00	-9.79	1.80	240.00	34.43	9.78
3	11590.00	55.87	PK	68.20	-12.33	1.80	180.00	34.07	21.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11n40_5795MHz）									
No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	53.62	PK	68.20	-14.58	1.90	260.00	43.84	9.78
2	5850.00	42.97	AV	54.00	-11.03	1.90	260.00	33.19	9.78
3	11590.00	54.18	PK	68.20	-14.02	1.90	260.00	32.38	21.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5180MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	49.96	PK	68.20	-18.24	1.50	310	42.46	7.50
2	5150.00	39.66	AV	54.00	-14.34	1.50	310	32.16	7.50
3	10360.00	52.37	PK	68.20	-15.83	1.50	310	32.57	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5180MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	51.11	PK	68.20	-17.09	1.70	240	43.61	7.50
2	5150.00	40.87	AV	54.00	-13.13	1.70	240	33.37	7.50
3	10360.00	52.98	PK	68.20	-15.22	1.70	240	33.18	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	52.69	PK	68.20	-15.51	1.70	300	32.79	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5220MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	10400.00	54.98	PK	68.20	-13.22	1.50	287	35.08	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	51.87	PK	68.20	-16.33	1.50	330	43.87	8.00
2	5350.00	41.52	AV	54.00	-12.48	1.50	330	33.52	8.00
3	10480.00	53.33	PK	68.20	-14.87	1.50	300	33.43	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5240MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.98	PK	68.20	-15.22	1.60	320	44.98	8.00
2	5350.00	42.84	AV	54.00	-11.16	1.60	320	34.84	8.00
3	10480.00	54.97	PK	68.20	-13.23	1.60	320	35.07	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	52.47	PK	68.20	-15.73	2.00	310	42.82	9.65
2	11490.00	53.95	PK	68.20	-14.25	2.00	310	32.25	21.70
3	11490.00	43.84	AV	54.00	-10.16	2.00	310	22.14	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5745MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	53.68	PK	68.20	-14.52	1.50	240	44.03	9.65
2	11490.00	54.87	PK	68.20	-13.33	1.50	240	33.17	21.70
3	11490.00	46.39	AV	54.00	-7.61	1.50	240	24.69	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	54.11	PK	68.20	-14.09	1.40	390	32.41	21.70
2	11570.00	44.43	AV	54.00	-9.57	1.40	390	22.73	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5785MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	11570.00	54.69	PK	68.20	-13.51	1.40	300	32.99	21.70
2	11570.00	43.98	AV	54.00	-10.02	1.40	300	22.28	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac20_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.98	PK	68.20	-15.22	1.60	310	43.20	9.78
2	11650.00	55.16	PK	68.20	-13.04	1.60	310	33.26	21.90
3	11650.00	45.81	AV	54.00	-8.19	1.60	310	23.91	21.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac20_5825MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	52.68	PK	68.20	-15.52	2.00	200	42.90	9.78
2	11650.00	53.74	PK	68.20	-14.46	2.00	200	31.84	21.90
3	11650.00	44.20	AV	54.00	-9.8	2.00	200	22.30	21.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac40_5190MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	51.98	PK	68.20	-16.22	1.60	300.00	44.48	7.50
2	5150.00	41.20	AV	54.00	-12.8	1.60	300.00	33.70	7.50
3	10380.00	55.49	PK	68.20	-12.71	1.60	300.00	35.69	19.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac40_5190MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	52.19	PK	68.20	-16.01	1.70	290.00	44.69	7.50
2	5150.00	42.21	AV	54.00	-11.79	1.70	290.00	34.71	7.50
3	10380.00	53.98	PK	68.20	-14.22	1.70	290.00	34.18	19.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac40_5230MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	53.98	PK	68.20	-14.22	1.40	280.00	45.98	8.00
2	5350.00	43.63	AV	54.00	-10.37	1.40	280.00	35.63	8.00
3	10460.00	55.19	PK	68.20	-13.01	1.40	280.00	35.29	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac40_5230MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5350.00	52.19	PK	68.20	-16.01	2.00	140.00	44.19	8.00
2	5350.00	42.05	AV	54.00	-11.95	2.00	140.00	34.05	8.00
3	10460.00	53.31	PK	68.20	-21.54	2.00	140.00	33.41	19.90

NTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac40_5755MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.48	PK	68.20	-13.72	1.70	300.00	44.83	9.65
2	5725.00	46.12	AV	54.00	-7.88	1.70	300.00	36.47	9.65
3	11510.00	55.98	PK	68.20	-12.22	1.70	300.00	34.28	21.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac40_5755MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5725.00	54.87	PK	68.20	-13.33	1.60	280.00	45.22	9.65
2	5725.00	44.22	AV	54.00	-9.78	1.60	280.00	34.57	9.65
3	11510.00	56.32	PK	68.20	-11.88	1.60	280.00	34.62	21.70

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac40_5795MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	54.78	PK	68.20	-13.42	1.80	240.00	45.00	9.78
2	5850.00	44.04	AV	54.00	-9.96	1.80	240.00	34.26	9.78
3	11590.00	54.99	PK	68.20	-13.21	1.80	180.00	33.19	21.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac40_5795MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5850.00	53.00	PK	68.20	-15.2	1.90	260.00	43.22	9.78
2	5850.00	42.35	AV	54.00	-11.65	1.90	260.00	32.57	9.78
3	11590.00	54.26	PK	68.20	-13.94	1.90	260.00	32.46	21.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac-VHT80_5210MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	53.65	PK	68.20	-14.55	1.50	310.00	46.15	7.50
2	5150.00	42.99	AV	54.00	-11.01	1.50	310.00	35.49	7.50
3	10420.00	56.84	PK	68.20	-11.36	1.50	310.00	36.94	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac-VHT80_5210MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5150.00	54.98	PK	68.20	-13.22	1.60	300.00	47.48	7.50
2	5150.00	45.00	AV	54.00	-9.00	1.60	300.00	37.50	7.50
3	10420.00	55.88	PK	68.20	-12.32	1.60	300.00	35.98	19.90

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（802.11ac-VHT80_5775MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	53.62	PK	68.20	-14.58	1.80	330.00	43.84	9.78
2	5460.00	45.88	AV	54.00	-8.12	1.80	330.00	36.10	9.78
3	11550.00	54.98	PK	68.20	-13.22	1.80	330.00	33.18	21.80
4	11550.00	47.24	AV	54.00	-6.76	1.80	330.00	25.44	21.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（802.11ac-VHT80_5775MHz）									
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV/m)	Correction Factor (dB/m)
1	5460.00	53.55	PK	68.20	-14.65	1.70	290.00	43.77	9.78
2	5460.00	44.90	AV	54.00	-9.10	1.70	290.00	35.12	9.78
3	11550.00	54.92	PK	68.20	-13.28	1.70	290.00	33.12	21.80
4	11550.00	47.34	AV	54.00	-6.66	1.70	290.00	25.54	21.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

2.7. Conducted Emission

2.7.1. Limit of Conducted Emission

FCC 15.207,

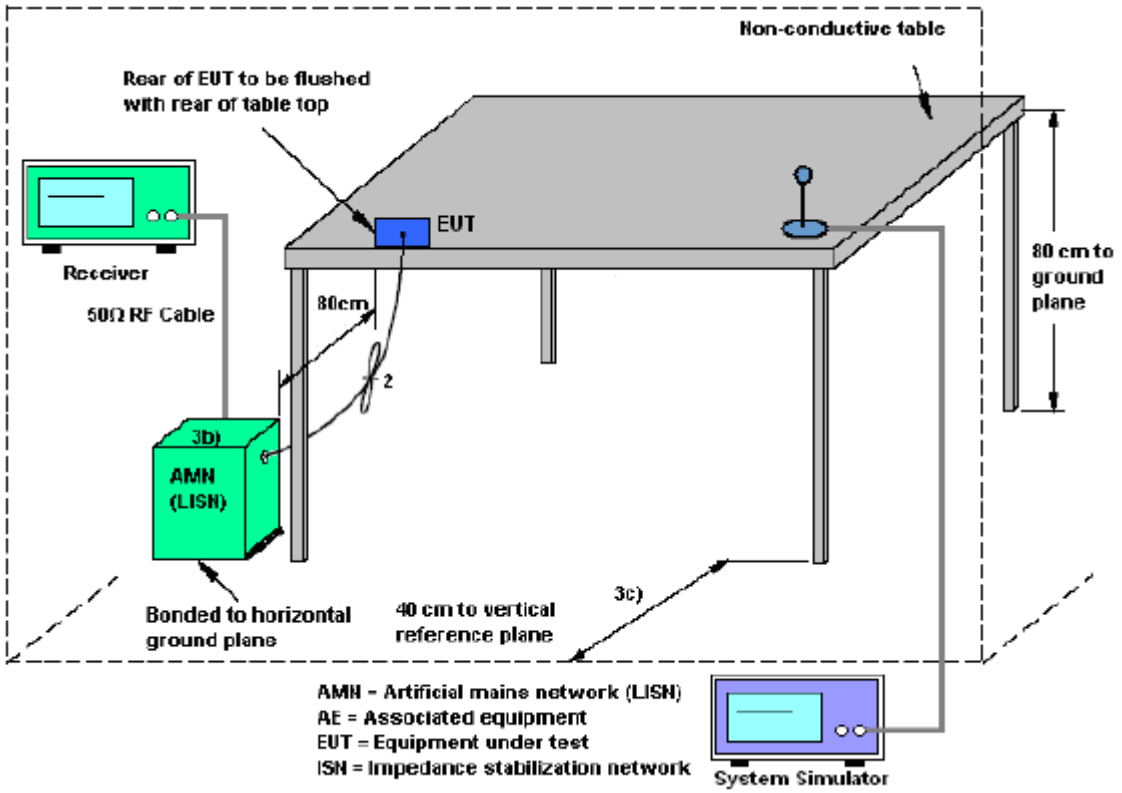
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

2.7.3. Test Setup

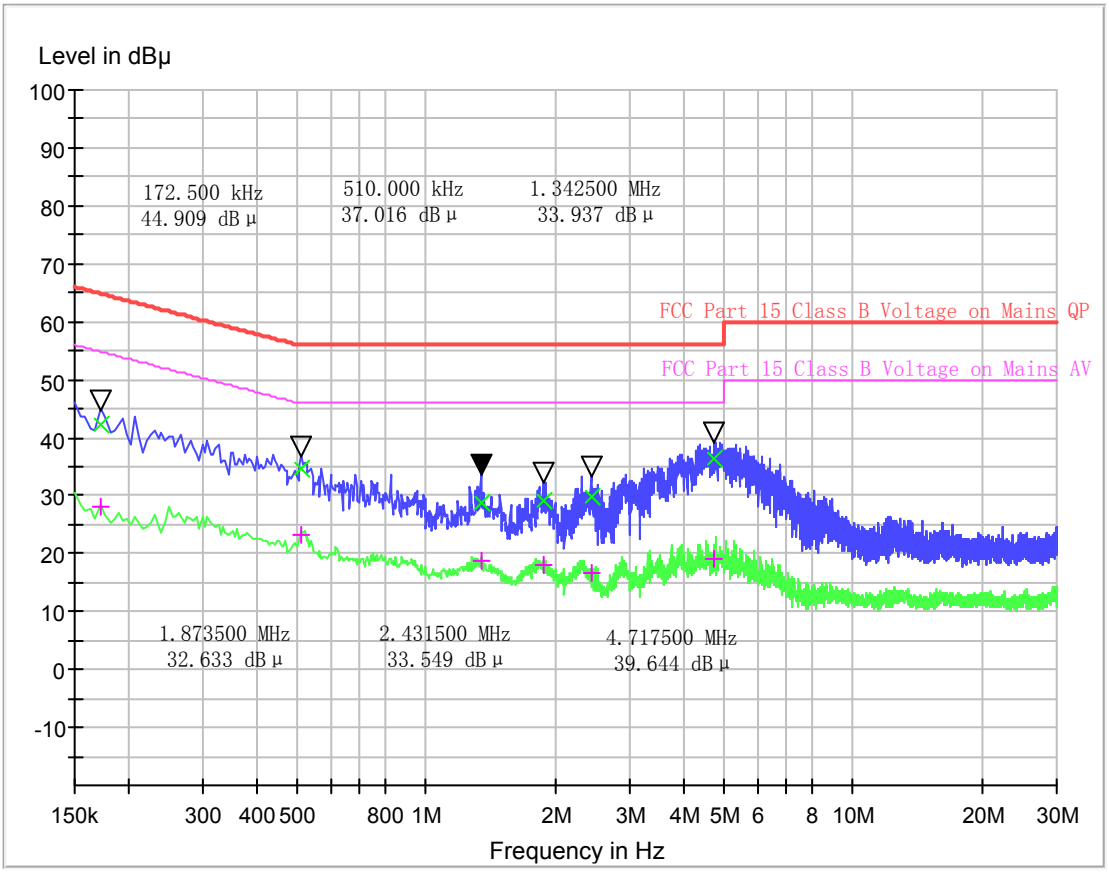


2.7.4. Test Procedures

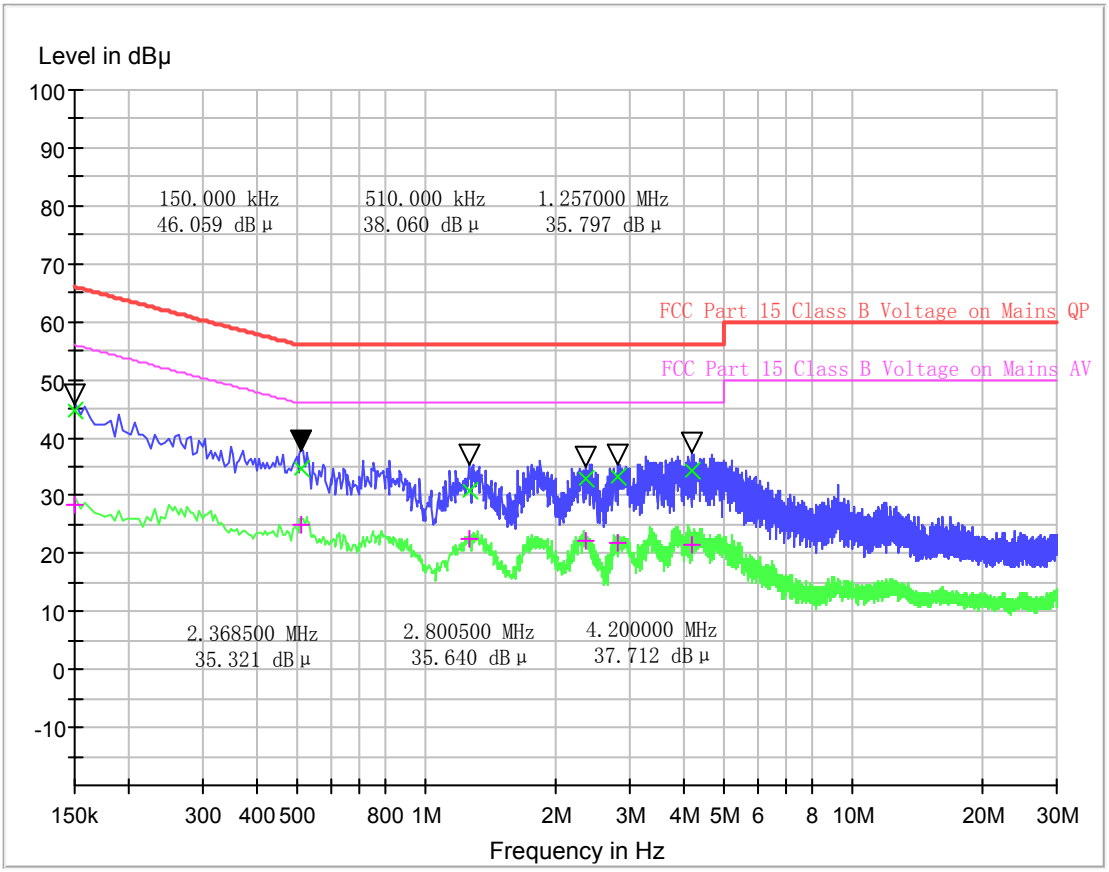
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

2.7.5. Test Results of Conducted Emission

The EUT configuration of the emission tests is 5G WLAN Link + USB Cable (Charging from Adapter)



Conducted Disturbance at Mains Terminals					
L Test Data					
QP			**AV**		
Frequency (MHz)	**Limits (dBµV)**	**Measurement Value (dBµV)**	**Frequency (MHz)**	**Limits (dBµV)**	**Measurement Value (dBµV)**
0.17250	64.8	42.36	0.17250	54.8	28.05
0.51000	56.0	34.79	0.51000	46.0	23.25
1.34250	56.0	28.72	1.34250	46.0	18.90
1.87350	56.0	29.10	1.87350	46.0	18.09
2.43150	56.0	29.86	2.43150	46.0	16.66
4.71750	56.0	36.30	4.71750	46.0	19.00



Conducted Disturbance at Mains Terminals					
N Test Data					
QP			AV		
Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)	Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)
0.150000	66.0	44.77	0.150000	56.0	28.53
0.510000	56.0	34.54	0.510000	46.0	24.95
1.257000	56.0	30.98	1.257000	46.0	22.42
2.368500	56.0	32.98	2.368500	46.0	22.06
2.800500	56.0	33.31	2.800500	46.0	22.00
4.200000	56.0	34.29	4.200000	46.0	21.65

Test result: PASS

3. List of measuring equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI TEST RECEIVER	R&S	ESW26	A180502935	2018.11.1	2019.10.31
2	Power Meter	R&S	NRP-Z31	102872	2019.5.5	2020.05.04
3	TURNTABLE	ETS	2088	2149	N/A	N/A
4	ANTENNA MAST	ETS	2075	2346	N/A	N/A
5	EMI TEST Software	R&S	ESK1	N/A	N/A	N/A
6	Horn antenna (18GHz~26.5GHz)	AR	AT4002A	305753	2017.11.10	2020.11.09
7	Amplifer	MILMEGA	80RF1000-250	A140901925	2017.10.09	2020.10.08
8	JS amplifer	AR	25S1G4AM1	A0304248	2017.10.09	2020.10.08
9	High pass filter	Compliance Direction systems	BSU-6	34202	2018.11.11	2019.11.10
13	Horn Antenna	ShwarzBeck	9120D	1012	2018.11.11	2019.11.10
14	Horn Antenna	ShwarzBeck	BBHA9170	25841	2018.11.11	2019.11.10
15	ULTRA-BROADBAND ANTENNA	R&S	HL562	A0304224	2017.07.14	2020.07.13
16	Passive Loop Antenna	R&S	HFH2-Z2	100047	2019.04.26	2022.04.25
17	Temperature chamber	Dongguan gaoda instrument CO.LTD	GD-7005-100	130130101	2019.04.22	2020.04.21
18	Spectrum Analyzer	Keysight	N9030A	A160702554	2018.11.15	2019.11.14
19	Power Supply	R&S	NGMO1	101037	2018.08.06	2019.08.05

Note: the calibration interval of test equipment is one year.

Appendix A

Conducted output power

Test results

Conducted Power Test results of band U-NII-1 (5150 ~ 5250 MHz)

802.11a mode				
Frequency (MHz)	Conducted Output Power (dBm)		FCC Limit (dBm)	Result
	Antenna 0	Antenna 1		
5180	13.48	13.29	24	PASS
5220	14.24	13.06	24	PASS
5240	14.76	12.98	24	PASS

802.11n-HT20 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5180	11.10	9.37	13.33	24	PASS
5220	11.06	9.65	13.42	24	PASS
5240	10.51	9.55	13.07	24	PASS

802.11n-HT40 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5190	11.67	10.25	14.03	24	PASS
5230	11.18	10.05	13.66	24	PASS

802.11ac-VHT20 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5180	11.24	9.62	13.52	24	PASS
5220	11.36	9.60	13.58	24	PASS
5240	10.97	10.16	13.59	24	PASS

802.11ac-VHT40 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5190	10.57	9.16	12.93	24	PASS
5230	10.55	8.90	12.81	24	PASS

802.11ac-VHT80 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5210	10.12	8.92	12.57	24	PASS

Conducted Power Test results of band U-NII-3 (5725 ~ 5850 MHz)

802.11a mode				
Frequency (MHz)	Conducted Output Power (dBm)		FCC Limit (dBm)	Result
	Antenna 0	Antenna 1		
5745	12.30	14.82	30	PASS
5785	12.22	14.74	30	PASS
5825	12.90	14.42	30	PASS

802.11n-HT20 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5745	11.25	12.12	14.72	30	PASS
5785	11.14	12.12	14.67	30	PASS
5825	11.69	11.95	14.83	30	PASS

802.11n-HT40 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5755	11.95	12.78	15.40	30	PASS
5795	12.28	12.57	15.44	30	PASS

802.11ac-VHT20 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5745	11.46	12.34	14.93	30	PASS
5785	11.81	12.35	15.10	30	PASS
5825	12.34	11.99	15.18	30	PASS

802.11ac-VHT40 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5755	10.87	11.41	14.16	30	PASS
5795	11.49	11.61	14.56	30	PASS

802.11ac-VHT80 mode					
Test Frequency (MHz)	Conducted Output Power (dBm)			FCC Limit (dBm)	Result
	Antenna 0	Antenna 1	Total		
5775	10.40	10.76	13.59	30	PASS

AVGSA Power Spectral Density

Conducted PSD Test results of band U-NII-1 (5150~5250MHz)

802.11a mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1			
5180	3.504	3.093		11	PASS
5220	3.985	2.931		11	PASS
5240	4.710	2.796		11	PASS
802.11n-HT20 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5180	0.805	-0.304	3.30	11	PASS
5220	0.857	-0.419	3.28	11	PASS
5240	0.490	-0.752	2.92	11	PASS
802.11n-HT40 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5190	-2.394	-3.434	0.13	11	PASS
5230	-2.607	-3.900	-0.20	11	PASS
802.11ac-VHT20 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5180	1.002	-0.512	3.32	11	PASS
5220	1.145	-0.390	3.46	11	PASS
5240	0.677	-0.074	3.33	11	PASS
802.11ac-VHT40 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5190	-3.119	-4.670	-0.82	11	PASS
5230	-3.601	-4.606	-1.06	11	PASS
802.11n-VHT80 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/MHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5210	-6.410	-7.805	-4.04	11	PASS

Conducted PSD Test results of band U-NII-3 (5725 ~ 5850 MHz)

802.11a mode				
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1		
5745	-0.361	1.910	30	PASS
5785	-0.558	1.911	30	PASS
5825	0.172	2.033	30	PASS

802.11n-HT20 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5745	-1.987	-0.553	1.80	30	PASS
5785	-1.684	-0.716	1.84	30	PASS
5825	-1.050	-1.063	1.95	30	PASS

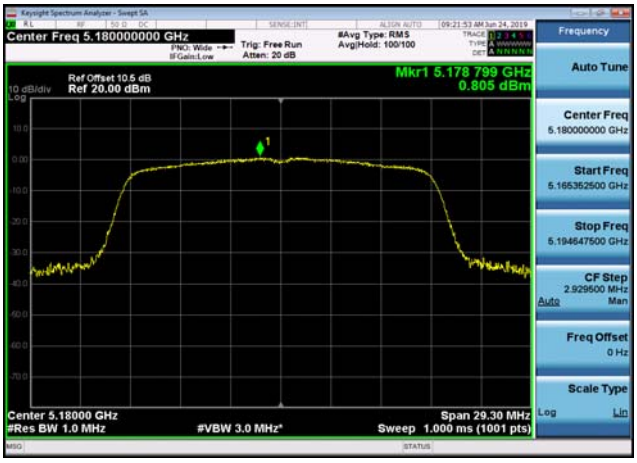
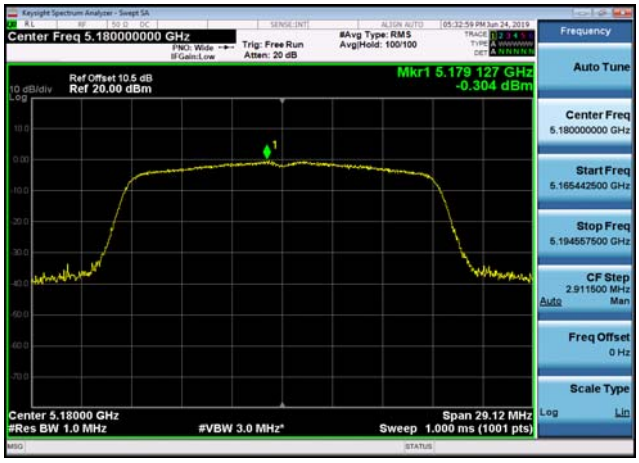
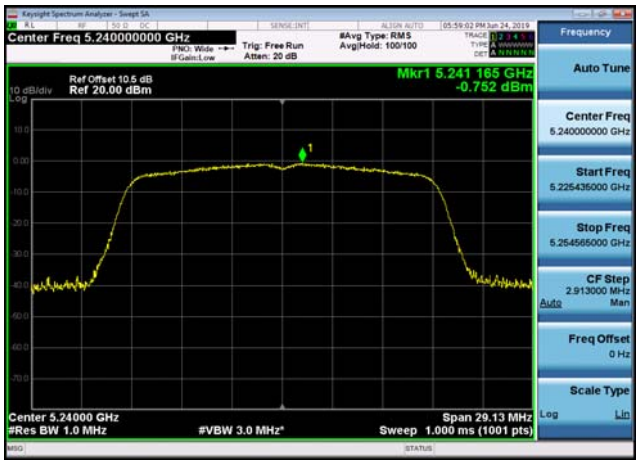
802.11n-HT40 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5755	-4.725	-3.626	-1.13	30	PASS
5795	-4.316	-3.836	-1.06	30	PASS

802.11ac-VHT20 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5745	-1.616	-0.822	1.81	30	PASS
5785	-1.240	-0.722	2.04	30	PASS
5825	-0.292	-0.720	2.51	30	PASS

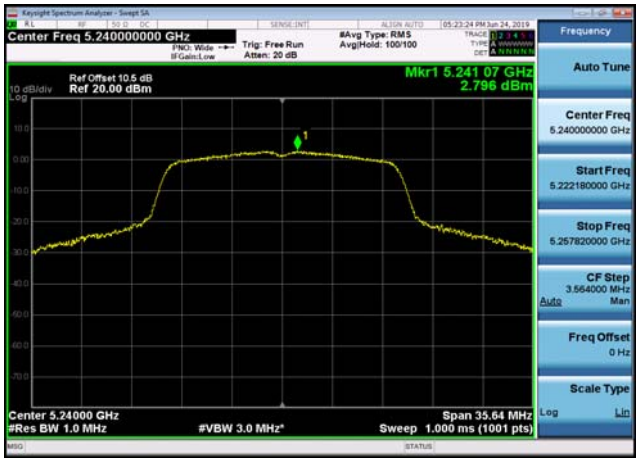
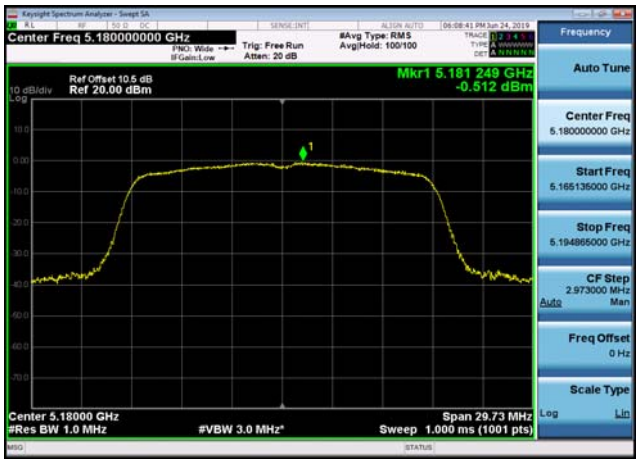
802.11ac-VHT40 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5755	-5.269	-4.479	-1.85	30	PASS
5795	-4.640	-4.532	-1.58	30	PASS

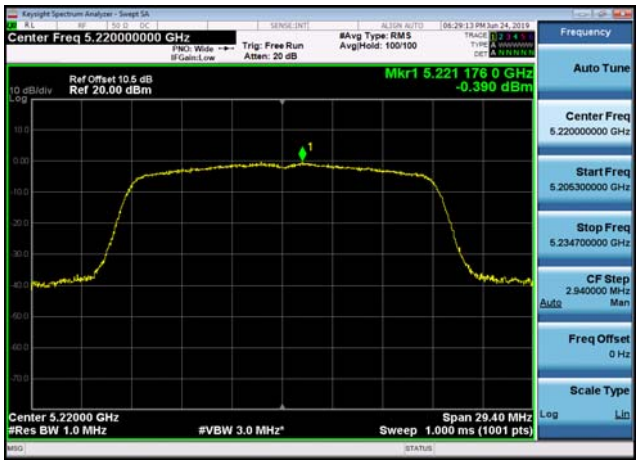
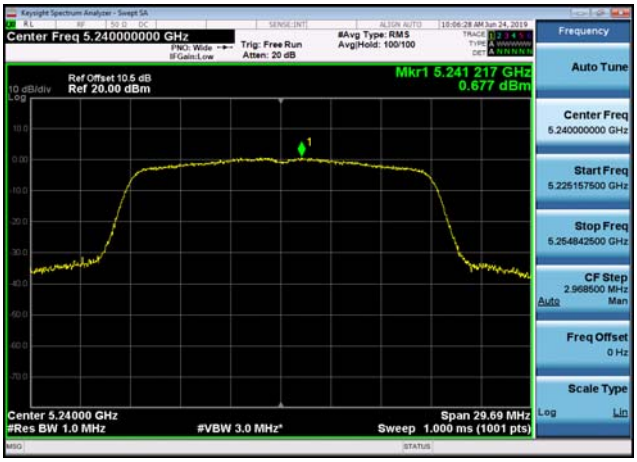
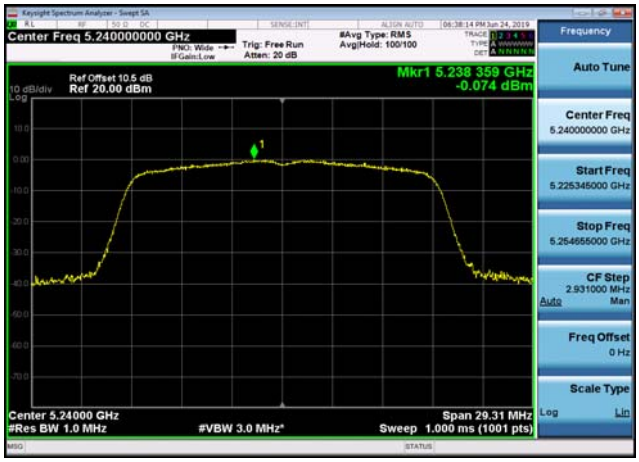
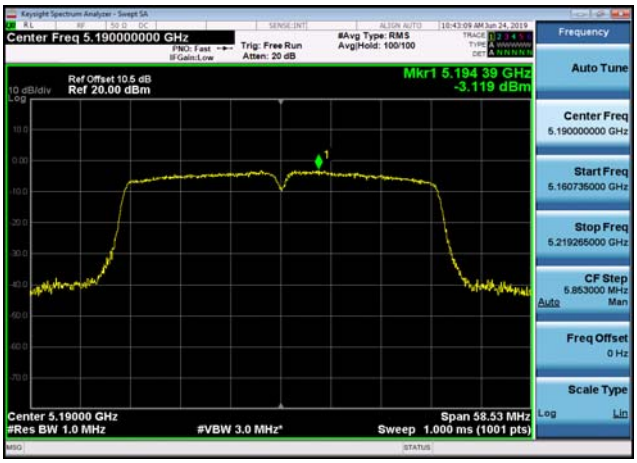
802.11n-VHT80 mode					
Test Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Limit (dBm/MHz)	Result
	Antenna 0	Antenna 1	Total		
5775	-8.756	-7.471	-5.06	30	PASS

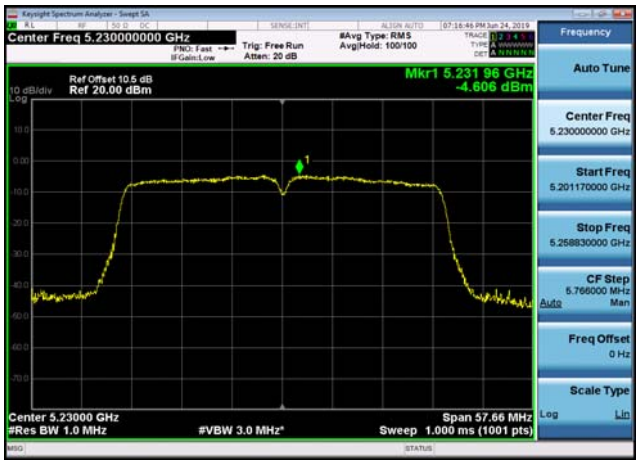
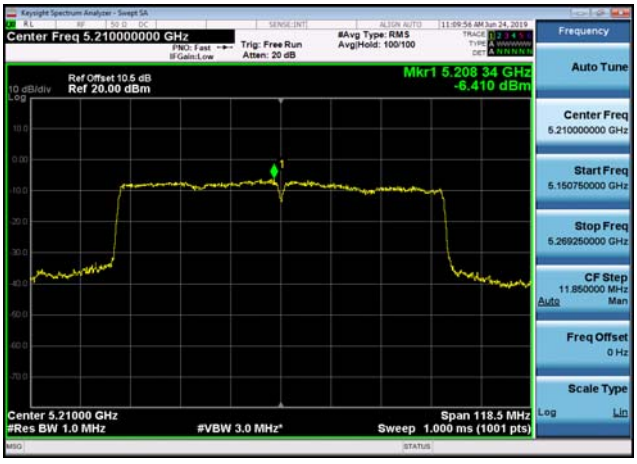
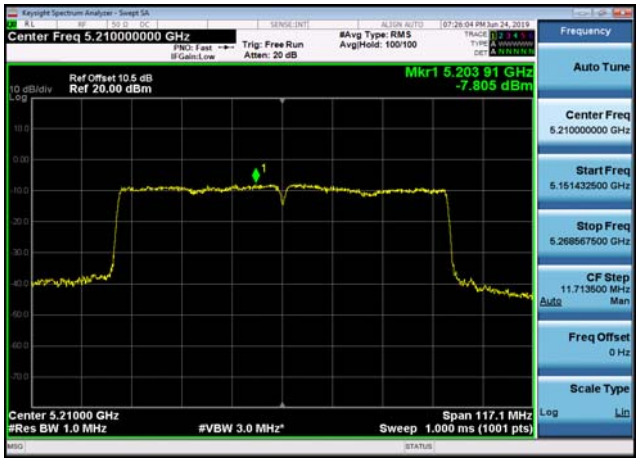
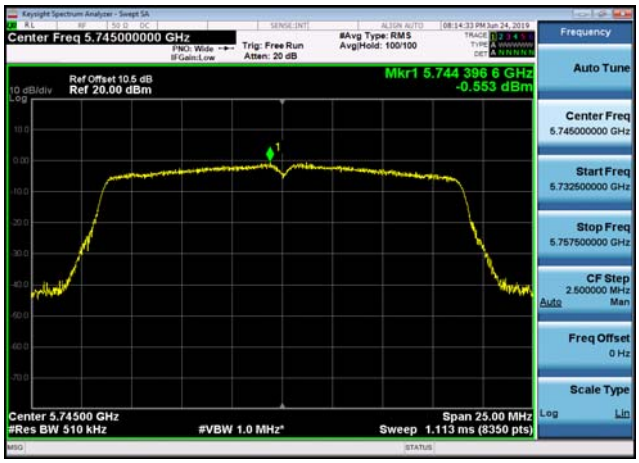
Test Plots

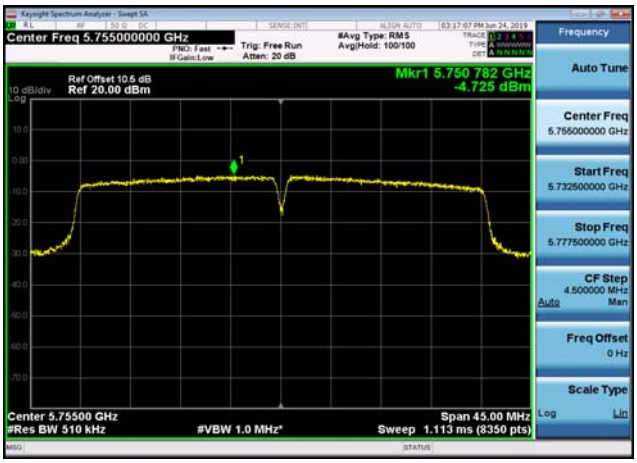
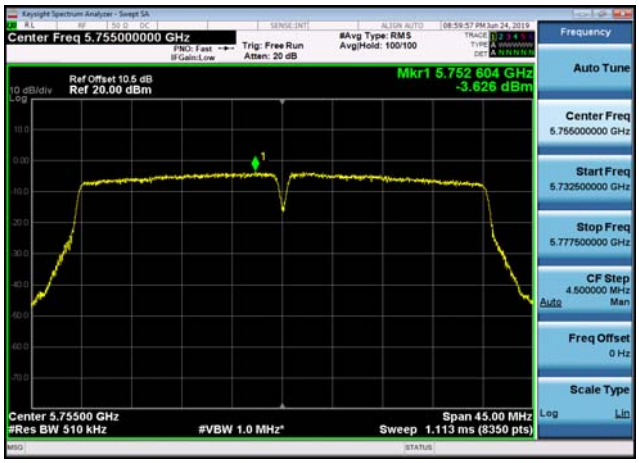
U-NII-1 Power spectral density-802.11 n(20MHz),5180MHz,Ant1	U-NII-1 Power spectral density-802.11 n(20MHz),5180MHz,Ant2
	
U-NII-1 Power spectral density-802.11 n(20MHz),5220MHz,Ant1	U-NII-1 Power spectral density-802.11 n(20MHz),5220MHz,Ant2
	
U-NII-1 Power spectral density-802.11 n(20MHz),5240MHz,Ant1	U-NII-1 Power spectral density-802.11 n(20MHz),5240MHz,Ant2
	

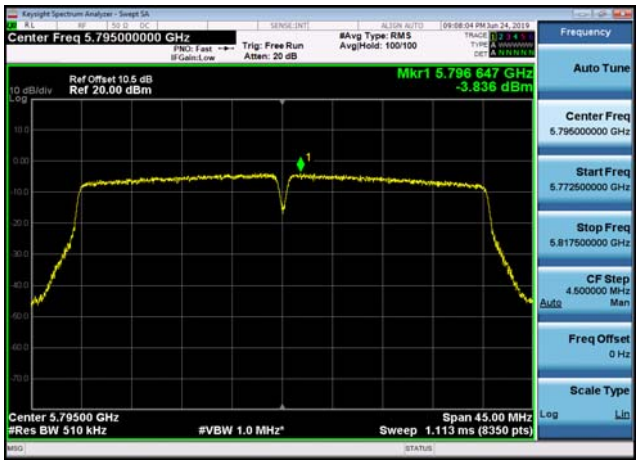
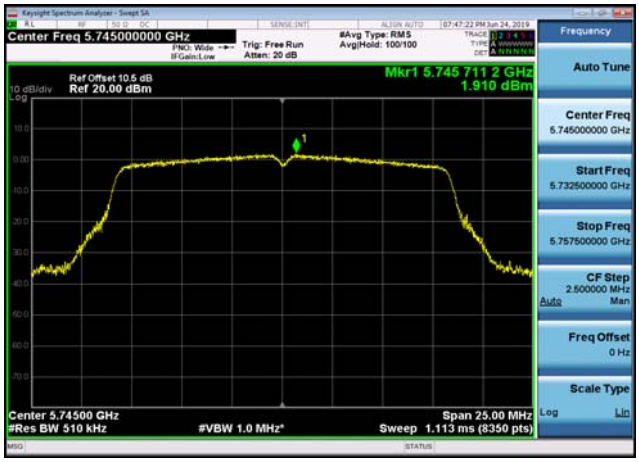
U-NII-1 Power spectral density-802.11 n(40MHz),5190MHz,Ant1	U-NII-1 Power spectral density-802.11 n(40MHz),5190MHz,Ant2
	
U-NII-1 Power spectral density-802.11 n(40MHz),5230MHz,Ant1	U-NII-1 Power spectral density-802.11 n(40MHz),5230MHz,Ant2
	
U-NII-1 Power spectral density-802.11 a(20MHz),5180MHz,Ant1	U-NII-1 Power spectral density-802.11 a(20MHz),5180MHz,Ant2
	

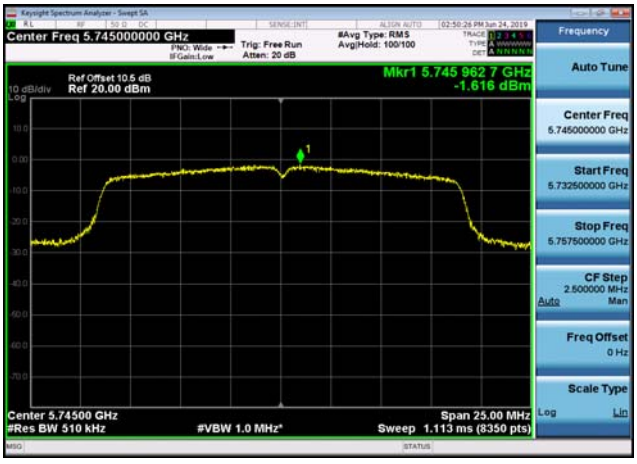
U-NII-1 Power spectral density-802.11 a(20MHz),5220MHz,Ant1	U-NII-1 Power spectral density-802.11 a(20MHz),5220MHz,Ant2
	
U-NII-1 Power spectral density-802.11 a(20MHz),5240MHz,Ant1	U-NII-1 Power spectral density-802.11 a(20MHz),5240MHz,Ant2
	
U-NII-1 Power spectral density-802.11 ac(20MHz),5180MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(20MHz),5180MHz,Ant2
	

U-NII-1 Power spectral density-802.11 ac(20MHz),5220MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(20MHz),5220MHz,Ant2
	
U-NII-1 Power spectral density-802.11 ac(20MHz),5240MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(20MHz),5240MHz,Ant2
	
U-NII-1 Power spectral density-802.11 ac(40MHz),5190MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(40MHz),5190MHz,Ant2
	

U-NII-1 Power spectral density-802.11 ac(40MHz),5230MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(40MHz),5230MHz,Ant2
	
U-NII-1 Power spectral density-802.11 ac(80MHz),5210MHz,Ant1	U-NII-1 Power spectral density-802.11 ac(80MHz),5210MHz,Ant2
	
U-NII-3 Power spectral density-802.11 n(20MHz),5745MHz,Ant1	U-NII-3 Power spectral density-802.11 n(20MHz),5745MHz,Ant2
	

U-NII-3 Power spectral density-802.11 n(20MHz),5785MHz,Ant1	U-NII-3 Power spectral density-802.11 n(20MHz),5785MHz,Ant2
	
U-NII-3 Power spectral density-802.11 n(20MHz),5825MHz,Ant1	U-NII-3 Power spectral density-802.11 n(20MHz),5825MHz,Ant2
	
U-NII-3 Power spectral density-802.11 n(40MHz),5755MHz,Ant1	U-NII-3 Power spectral density-802.11 n(40MHz),5755MHz,Ant2
	

U-NII-3 Power spectral density-802.11 n(40MHz),5795MHz,Ant1	U-NII-3 Power spectral density-802.11 n(40MHz),5795MHz,Ant2
	
U-NII-3 Power spectral density-802.11 a(20MHz),5745MHz,Ant1	U-NII-3 Power spectral density-802.11 a(20MHz),5745MHz,Ant2
	
U-NII-3 Power spectral density-802.11 a(20MHz),5785MHz,Ant1	U-NII-3 Power spectral density-802.11 a(20MHz),5785MHz,Ant2
	

U-NII-3 Power spectral density-802.11 a(20MHz),5825MHz,Ant1	U-NII-3 Power spectral density-802.11 a(20MHz),5825MHz,Ant2
	
U-NII-3 Power spectral density-802.11 ac(20MHz),5745MHz,Ant1	U-NII-3 Power spectral density-802.11 ac(20MHz),5745MHz,Ant2
	
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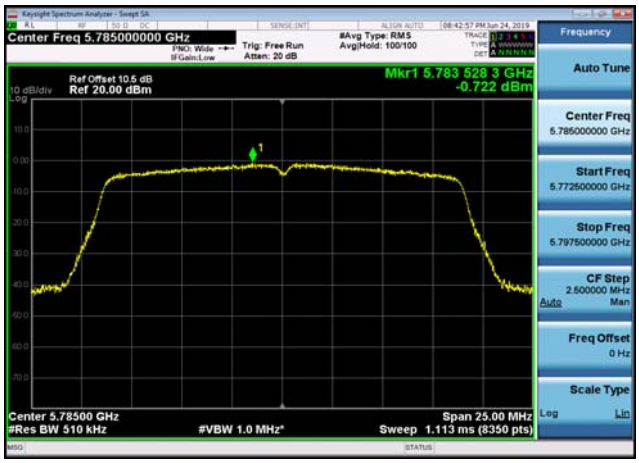
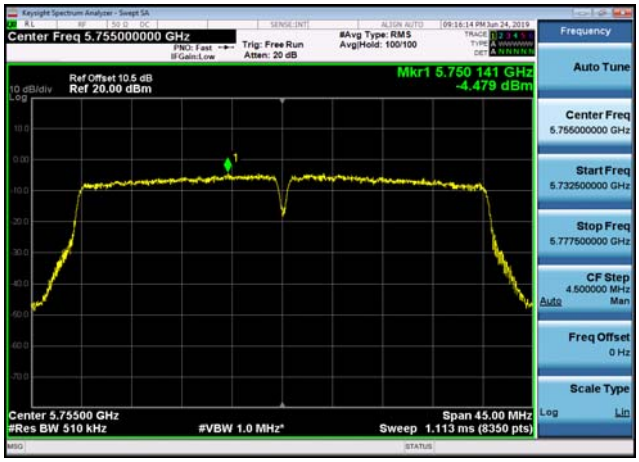
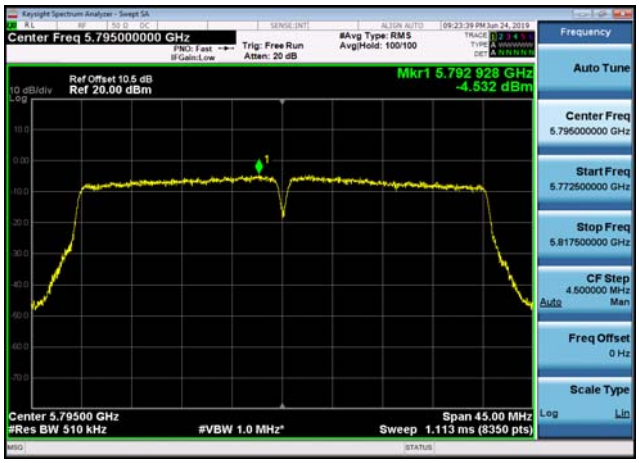
	

U-NII-3 Power spectral density-802.11 ac(20MHz),5825MHz,Ant1	U-NII-3 Power spectral density-802.11 ac(20MHz),5825MHz,Ant2
	
U-NII-3 Power spectral density-802.11 ac(40MHz),5755MHz,Ant1	U-NII-3 Power spectral density-802.11 ac(40MHz),5755MHz,Ant2
	
U-NII-3 Power spectral density-802.11 ac(40MHz),5795MHz,Ant1	U-NII-3 Power spectral density-802.11 ac(40MHz),5795MHz,Ant2
	

U-NII-3 Power spectral density-802.11 ac(80MHz),5775MHz,Ant1	U-NII-3 Power spectral density-802.11 ac(80MHz),5775MHz,Ant2
	

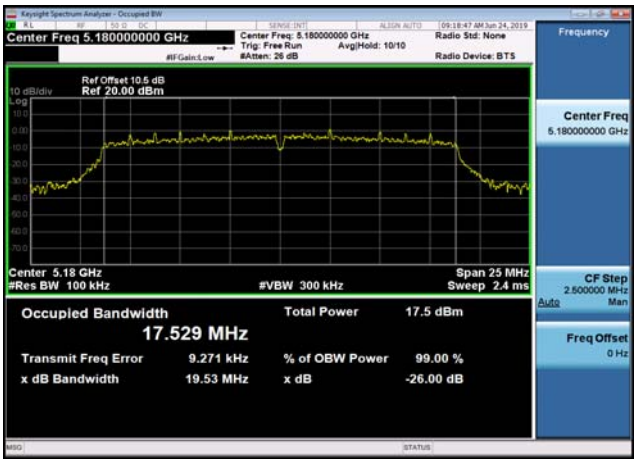
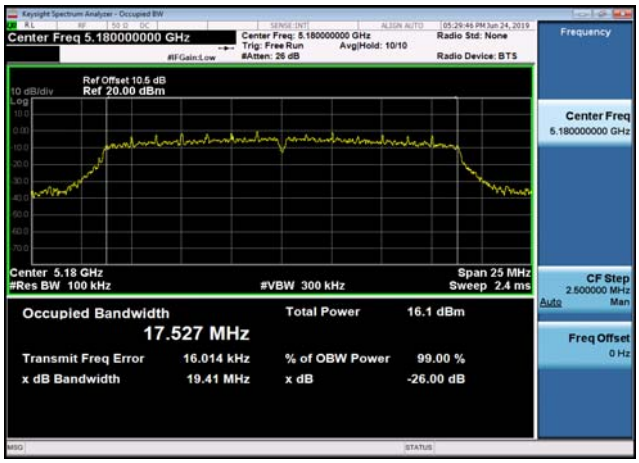
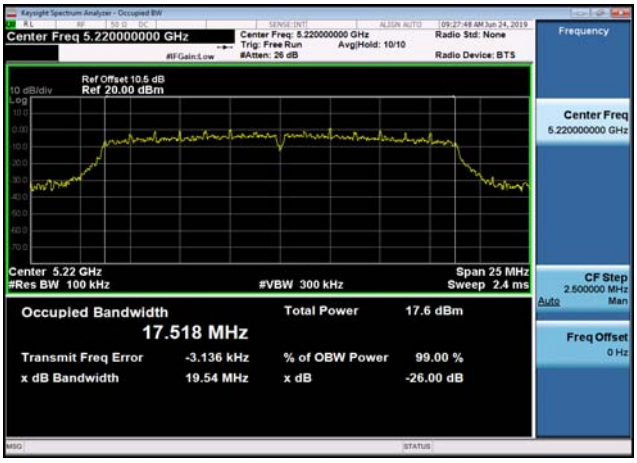
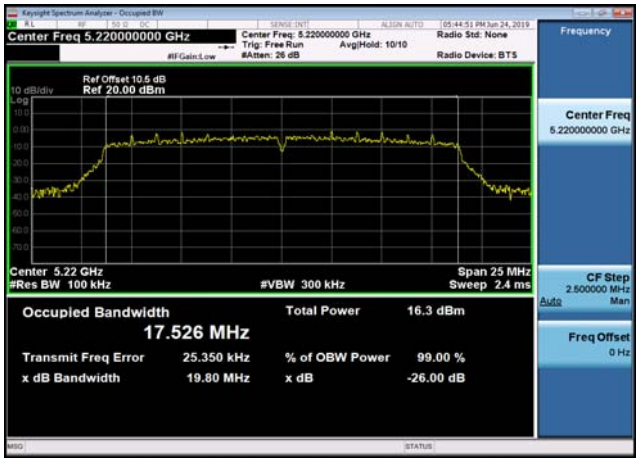
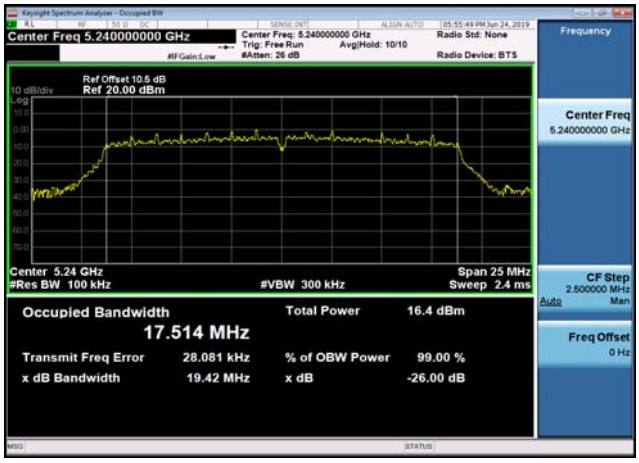
26dB and 6dB Down Bandwidth

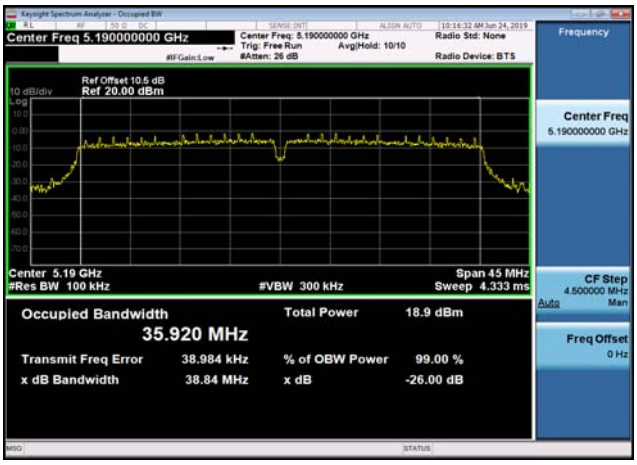
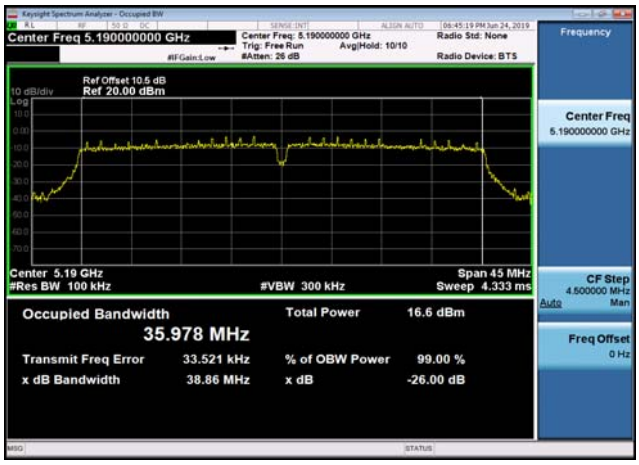
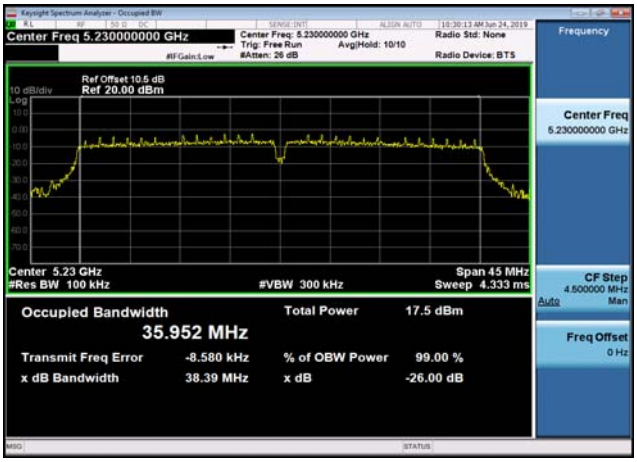
Test Result and Data

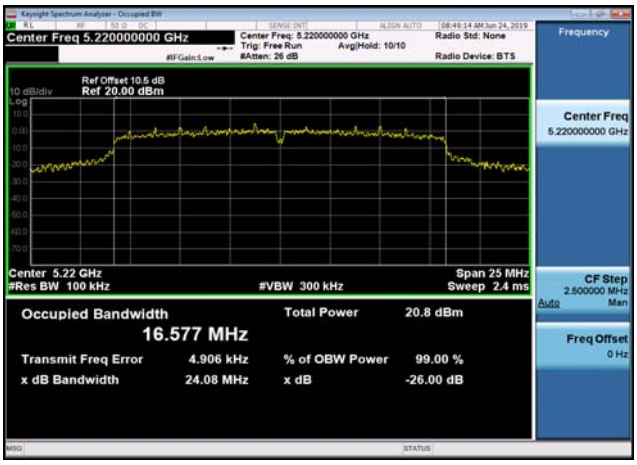
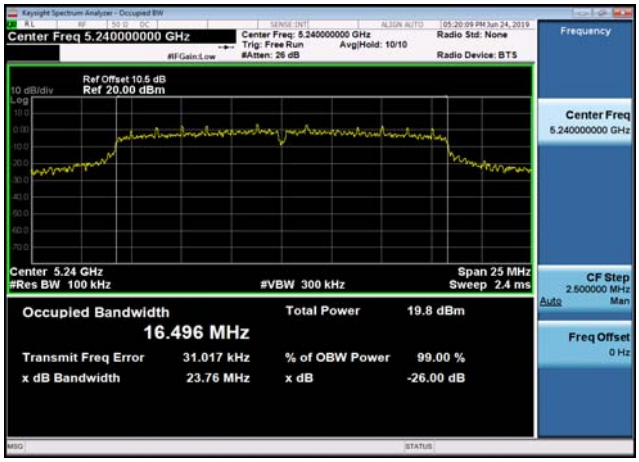
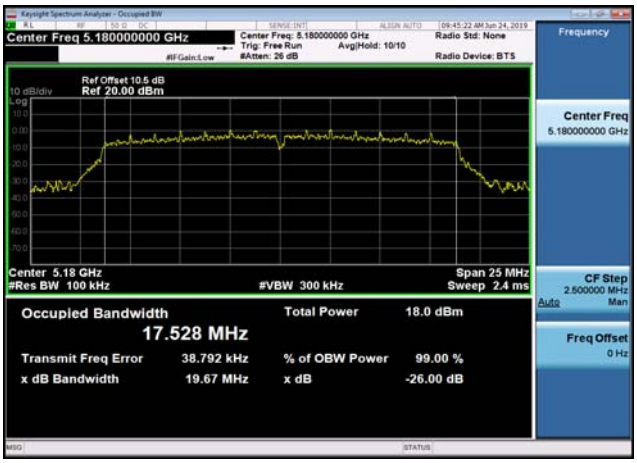
U-NII-1 Occupied 26 dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11n (20MHz)	5180	Ant0	19.53	Pass
802.11n (20MHz)	5180	Ant1	19.41	Pass
802.11n (20MHz)	5220	Ant0	19.54	Pass
802.11n (20MHz)	5220	Ant1	19.80	Pass
802.11n (20MHz)	5240	Ant0	19.47	Pass
802.11n (20MHz)	5240	Ant1	19.42	Pass
802.11n (40MHz)	5190	Ant0	38.84	Pass
802.11n (40MHz)	5190	Ant1	38.86	Pass
802.11n (40MHz)	5230	Ant0	38.39	Pass
802.11n (40MHz)	5230	Ant1	38.84	Pass
802.11ac (20MHz)	5180	Ant0	19.67	Pass
802.11ac (20MHz)	5180	Ant1	19.82	Pass
802.11ac (20MHz)	5220	Ant0	19.46	Pass
802.11ac (20MHz)	5220	Ant1	19.60	Pass
802.11ac (20MHz)	5240	Ant0	19.79	Pass
802.11ac (20MHz)	5240	Ant1	19.54	Pass
802.11ac (40MHz)	5190	Ant0	39.02	Pass
802.11ac (40MHz)	5190	Ant1	38.78	Pass
802.11ac (40MHz)	5230	Ant0	39.05	Pass
802.11ac (40MHz)	5230	Ant1	38.44	Pass
802.11ac (80MHz)	5210	Ant0	79.00	Pass
802.11ac (80MHz)	5210	Ant1	78.09	Pass
802.11a (20MHz)	5180	Ant0	24.15	Pass
802.11a (20MHz)	5180	Ant1	24.02	Pass
802.11a (20MHz)	5220	Ant0	24.08	Pass
802.11a (20MHz)	5220	Ant1	23.12	Pass
802.11a (20MHz)	5240	Ant0	23.83	Pass
802.11a (20MHz)	5240	Ant1	23.76	Pass

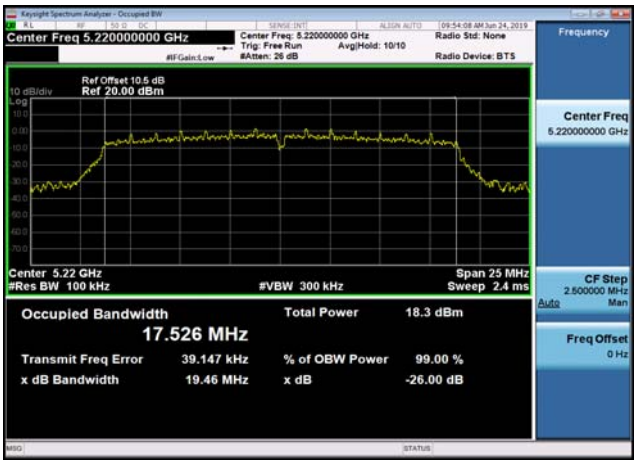
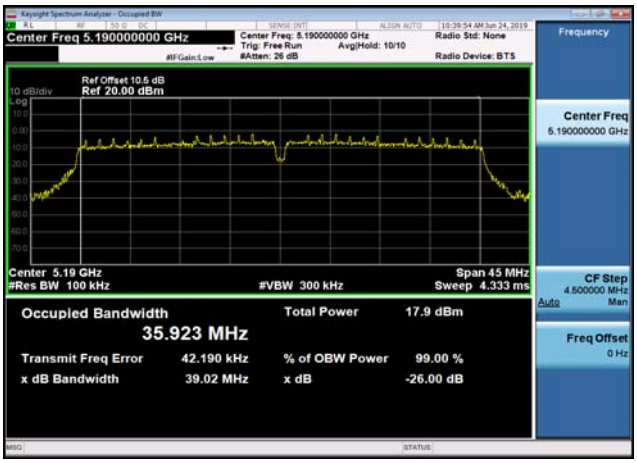
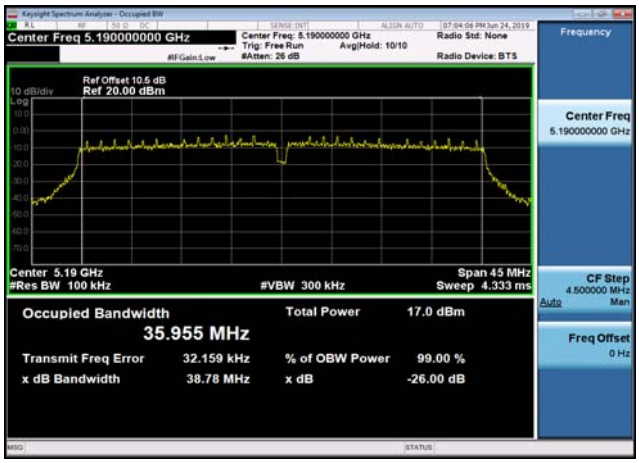
U-NII-3 Occupied 6 dB Bandwidth				
Mode	Test Frequency (MHz)	Ant	Occupied Bandwidth (MHz)	Result
802.11n (20MHz)	5745	Ant0	15.05	Pass
802.11n (20MHz)	5745	Ant1	14.63	Pass
802.11n (20MHz)	5785	Ant0	15.92	Pass
802.11n (20MHz)	5785	Ant1	15.12	Pass
802.11n (20MHz)	5825	Ant0	15.11	Pass
802.11n (20MHz)	5825	Ant1	13.87	Pass
802.11n (40MHz)	5755	Ant0	35.07	Pass
802.11n (40MHz)	5755	Ant1	35.14	Pass
802.11n (40MHz)	5795	Ant0	34.97	Pass
802.11n (40MHz)	5795	Ant1	35.12	Pass
802.11ac (20MHz)	5745	Ant0	15.14	Pass
802.11ac (20MHz)	5745	Ant1	15.13	Pass
802.11ac (20MHz)	5785	Ant0	15.14	Pass
802.11ac (20MHz)	5785	Ant1	15.11	Pass
802.11ac (20MHz)	5825	Ant0	15.11	Pass
802.11ac (20MHz)	5825	Ant1	15.14	Pass
802.11ac (40MHz)	5755	Ant0	35.13	Pass
802.11ac (40MHz)	5755	Ant1	35.13	Pass
802.11ac (40MHz)	5795	Ant0	35.14	Pass
802.11ac (40MHz)	5795	Ant1	35.12	Pass
802.11ac (80MHz)	5775	Ant0	75.40	Pass
802.11ac (80MHz)	5775	Ant1	75.82	Pass
802.11a (20MHz)	5745	Ant0	15.08	Pass
802.11a (20MHz)	5745	Ant1	12.14	Pass
802.11a (20MHz)	5785	Ant0	15.03	Pass
802.11a (20MHz)	5785	Ant1	13.22	Pass
802.11a (20MHz)	5825	Ant0	15.02	Pass
802.11a (20MHz)	5825	Ant1	13.78	Pass

Test Plots

U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5180MHz,Ant1	U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5180MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5220MHz,Ant1	U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5220MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5240MHz,Ant1	U-NII-1 26dB Bandwidth-802.11n(20MHz) ,5240MHz,Ant2
	

U-NII-1 26dB Bandwidth-802.11n(40MHz) ,5190MHz,Ant1	U-NII-1 26dB Bandwidth-802.11n(40MHz) ,5190MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11n(40MHz) ,5230MHz,Ant1	U-NII-1 26dB Bandwidth-802.11n(40MHz) ,5230MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5180MHz,Ant1	U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5180MHz,Ant2
	

U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5220MHz,Ant1	U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5220MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5240MHz,Ant1	U-NII-1 26dB Bandwidth-802.11a(20MHz) ,5240MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11ac(20MHz),5180MHz,Ant1	U-NII-1 26dB Bandwidth-802.11ac(20MHz),5180MHz,Ant2
	

U-NII-1 26dB Bandwidth-802.11ac(20MHz),5220MHz,Ant1	U-NII-1 26dB Bandwidth-802.11ac(20MHz),5220MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11ac(20MHz),5240MHz,Ant1	U-NII-1 26dB Bandwidth-802.11ac(20MHz),5240MHz,Ant2
	
U-NII-1 26dB Bandwidth-802.11ac(40MHz),5190MHz,Ant1	U-NII-1 26dB Bandwidth-802.11ac(40MHz),5190MHz,Ant2
	

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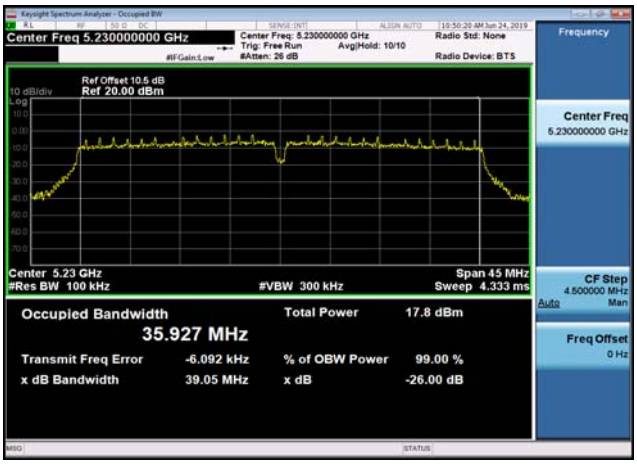
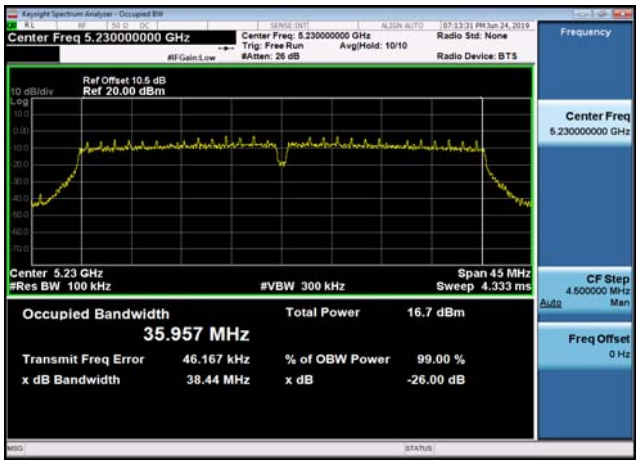
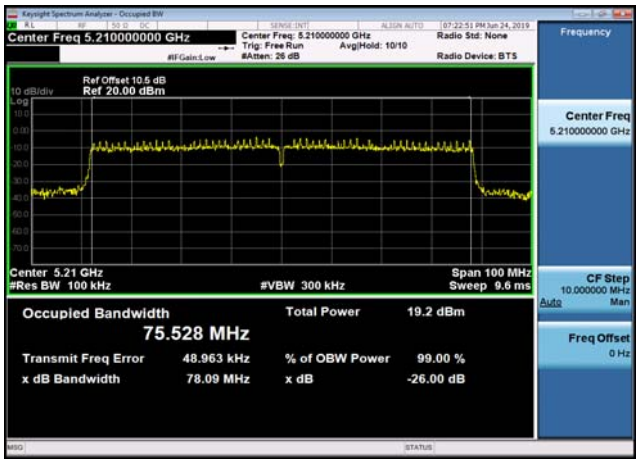
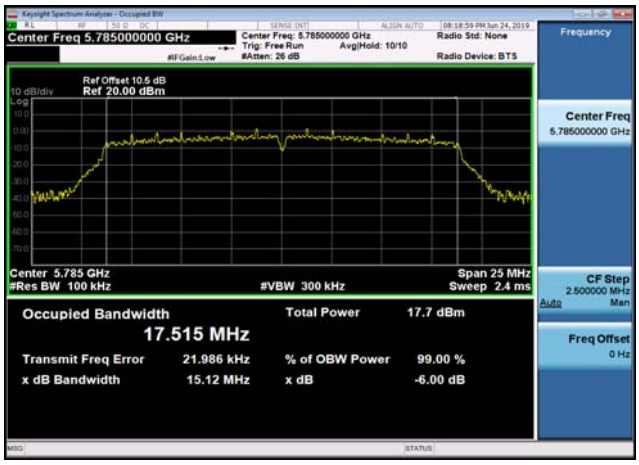
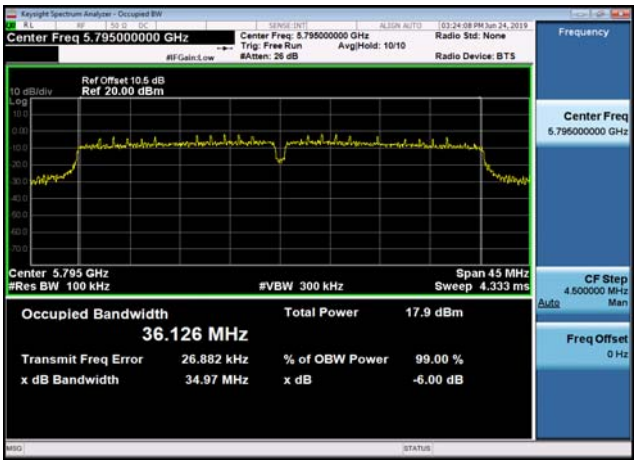
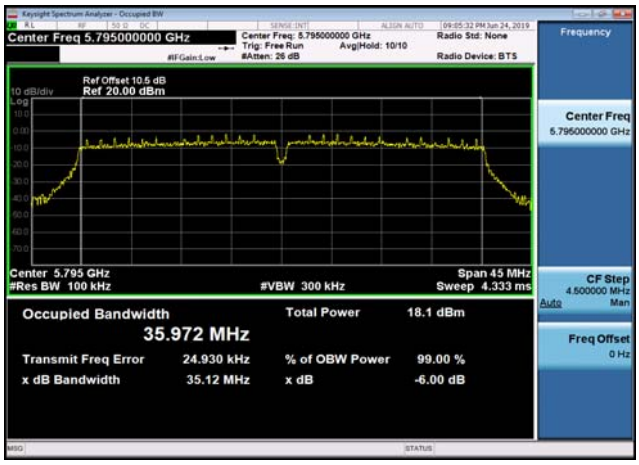
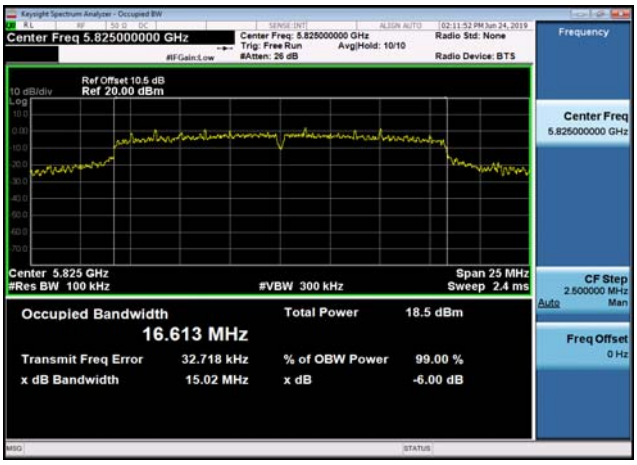
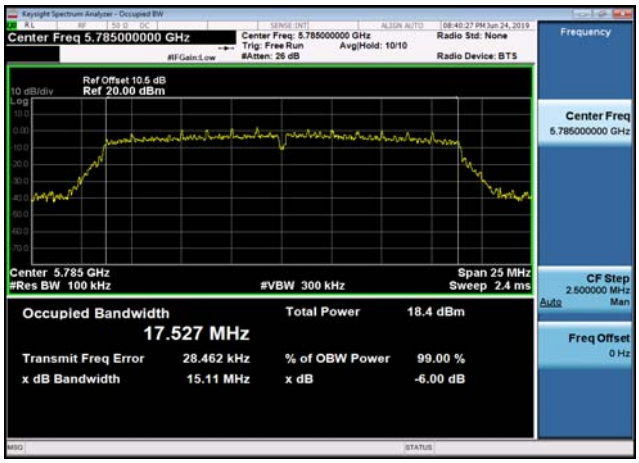
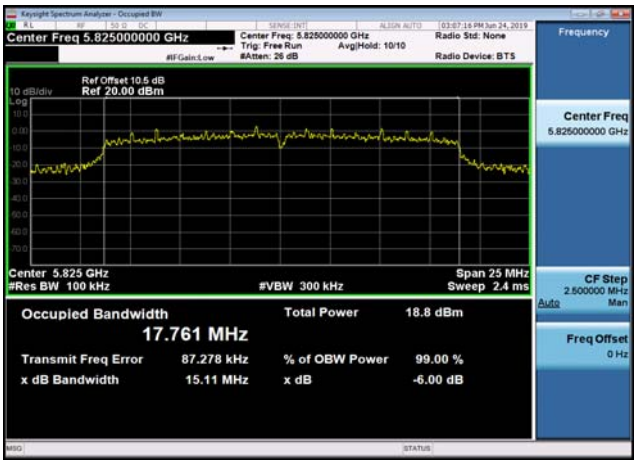
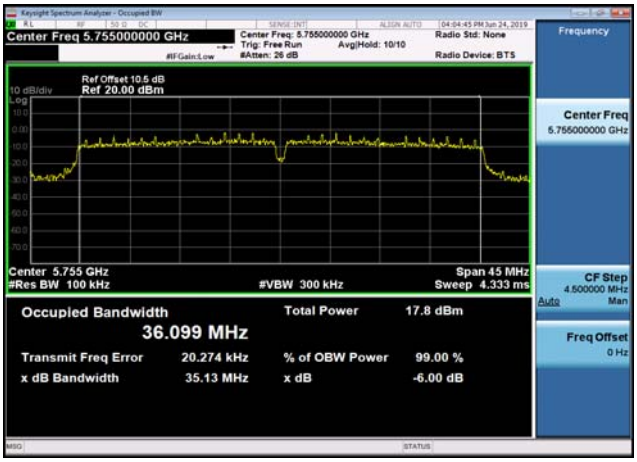
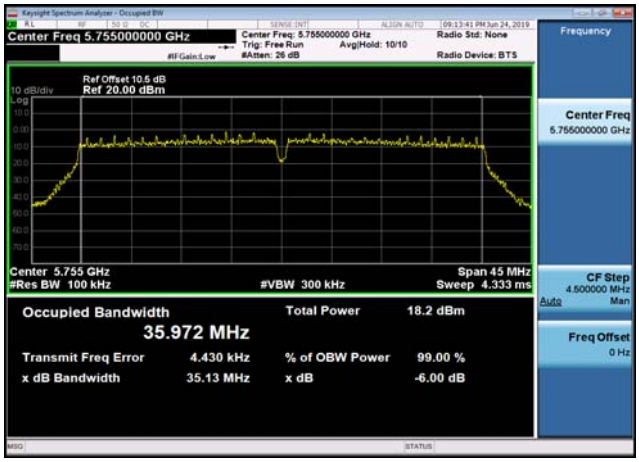
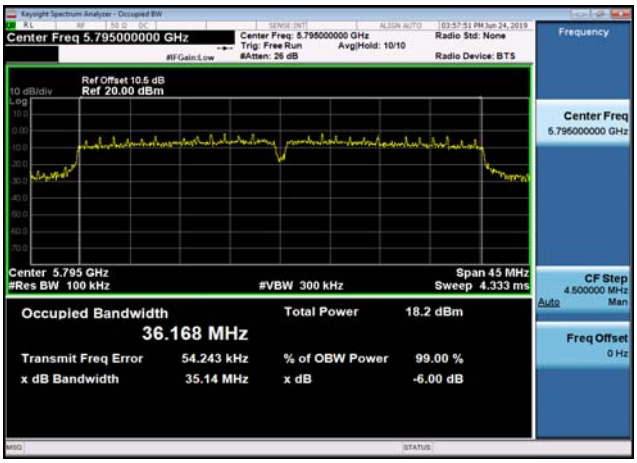
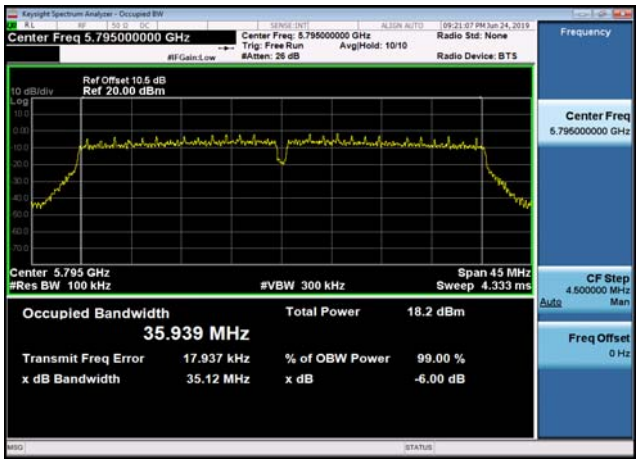
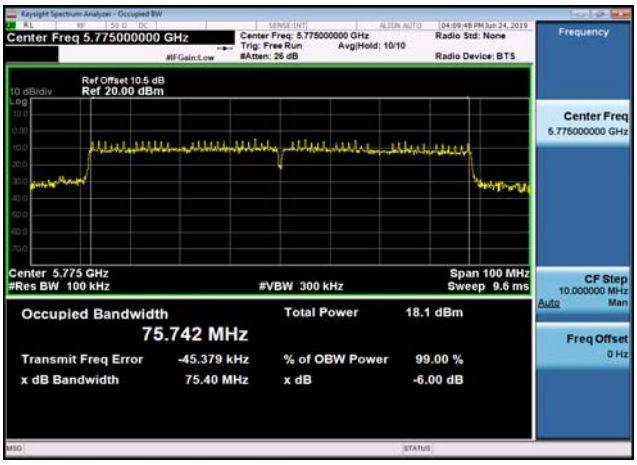
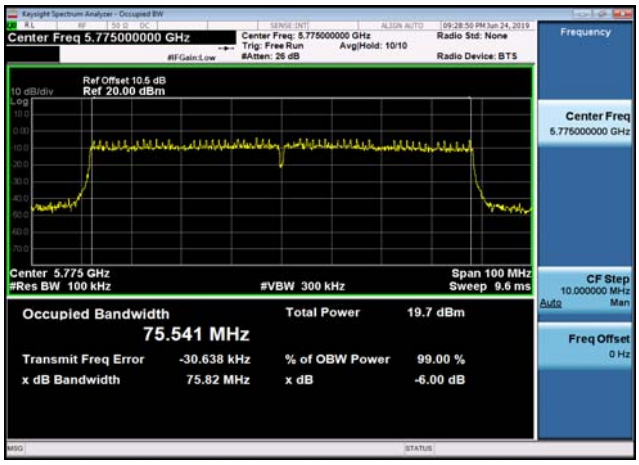
	
U-NII-1 26dB Bandwidth-802.11ac(80MHz),5210MHz,Ant1	U-NII-1 26dB Bandwidth-802.11ac(80MHz),5210MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5745MHz,Ant1	U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5745MHz,Ant2
	

U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5785MHz,Ant1	U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5785MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5825MHz,Ant1	U-NII-3 6dB Bandwidth-802.11n(20MHz) ,5825MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11n(40MHz) ,5755MHz,Ant1	U-NII-3 6dB Bandwidth-802.11n(40MHz) ,5755MHz,Ant2
	

U-NII-3 6dB Bandwidth-802.11n(40MHz) ,5795MHz,Ant1	U-NII-3 6dB Bandwidth-802.11n(40MHz) ,5795MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5745MHz,Ant1	U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5745MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5785MHz,Ant1	U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5785MHz,Ant2
	

U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5825MHz,Ant1	U-NII-3 6dB Bandwidth-802.11a(20MHz) ,5825MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5745MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5745MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5785MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5785MHz,Ant2
	

U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5825MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(20MHz) ,5825MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11ac(40MHz) ,5755MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(40MHz) ,5755MHz,Ant2
	
U-NII-3 6dB Bandwidth-802.11ac(40MHz) ,5795MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(40MHz) ,5795MHz,Ant2
	

U-NII-3 6dB Bandwidth-802.11ac(80MHz) ,5775MHz,Ant1	U-NII-3 6dB Bandwidth-802.11ac(80MHz) ,5775MHz,Ant2
	

Frequency Stability

U-NII-1 Centre Frequency							
Mode	Test Frequency (MHz)	Ant	LF (MHz)	HF (MHz)	CF (MHz)	Freq Stability (ppm)	Test Result
802.11n (20MHz)	5180	Ant1	5171.123	5188.868	5179.995	-0.880	Pass
802.11n (20MHz)	5180	Ant2	5171.238	5188.821	5180.029	5.630	Pass
802.11n (20MHz)	5220	Ant1	5211.207	5228.803	5220.005	0.880	Pass
802.11n (20MHz)	5220	Ant2	5211.172	5228.844	5220.008	1.520	Pass
802.11n (20MHz)	5240	Ant1	5231.128	5248.882	5240.005	0.950	Pass
802.11n (20MHz)	5240	Ant2	5231.229	5248.843	5240.036	6.920	Pass
802.11n (40MHz)	5190	Ant1	5171.858	5208.224	5190.041	7.800	Pass
802.11n (40MHz)	5190	Ant2	5171.868	5208.299	5190.083	16.040	Pass
802.11n (40MHz)	5230	Ant1	5211.789	5248.206	5229.997	-0.570	Pass
802.11n (40MHz)	5230	Ant2	5211.853	5248.293	5230.073	13.910	Pass
802.11ac (20MHz)	5180	Ant1	5171.263	5188.846	5180.055	10.540	Pass
802.11ac (20MHz)	5180	Ant2	5171.240	5188.861	5180.050	9.730	Pass
802.11ac (20MHz)	5220	Ant1	5211.233	5228.866	5220.050	9.500	Pass
802.11ac (20MHz)	5220	Ant2	5211.274	5228.845	5220.060	11.410	Pass
802.11ac (20MHz)	5240	Ant1	5231.256	5248.842	5240.049	9.300	Pass
802.11ac (20MHz)	5240	Ant2	5231.263	5248.868	5240.065	12.480	Pass
802.11ac (40MHz)	5190	Ant1	5171.870	5208.233	5190.051	9.830	Pass
802.11ac (40MHz)	5190	Ant2	5171.846	5208.224	5190.035	6.650	Pass
802.11ac	5230	Ant1	5211.852	5248.236	5230.044	8.320	Pass

(40MHz)							
802.11ac (40MHz)	5230	Ant2	5211.819	5248.257	5230.038	7.170	Pass
802.11ac (80MHz)	5210	Ant1	5171.847	5248.240	5210.043	8.320	Pass
802.11ac (80MHz)	5210	Ant2	5171.830	5248.327	5210.078	15.040	Pass
802.11a (20MHz)	5180	Ant1	5171.811	5188.222	5180.016	3.140	Pass
802.11a (20MHz)	5180	Ant2	5171.873	5188.213	5180.043	8.370	Pass
802.11a (20MHz)	5220	Ant1	5211.774	5228.193	5219.984	-3.110	Pass
802.11a (20MHz)	5220	Ant2	5211.758	5228.297	5220.028	5.270	Pass
802.11a (20MHz)	5240	Ant1	5231.775	5248.208	5239.992	-1.590	Pass
802.11a (20MHz)	5240	Ant2	5231.854	5248.219	5240.037	7.000	Pass

U-NII-3 Centre Frequency							
Mode	Test Frequency (MHz)	Ant	LF (MHz)	HF (MHz)	CF (MHz)	Freq Stability (ppm)	Test Result
802.11n (20MHz)	5745	Ant1	5736.158	5753.850	5745.004	0.730	Pass
802.11n (20MHz)	5745	Ant2	5736.250	5753.842	5745.046	7.980	Pass
802.11n (20MHz)	5785	Ant1	5776.158	5793.875	5785.017	2.880	Pass
802.11n (20MHz)	5785	Ant2	5776.242	5793.842	5785.042	7.200	Pass
802.11n (20MHz)	5825	Ant1	5816.150	5833.900	5825.025	4.290	Pass
802.11n (20MHz)	5825	Ant2	5816.250	5833.850	5825.050	8.580	Pass
802.11n (40MHz)	5755	Ant1	5736.805	5773.255	5755.030	5.210	Pass
802.11n (40MHz)	5755	Ant2	5736.880	5773.240	5755.060	10.430	Pass
802.11n (40MHz)	5795	Ant1	5776.880	5813.255	5795.068	11.650	Pass
802.11n (40MHz)	5795	Ant2	5776.910	5813.255	5795.083	14.240	Pass
802.11ac (20MHz)	5745	Ant1	5736.283	5753.867	5745.075	13.050	Pass
802.11ac (20MHz)	5745	Ant2	5736.200	5753.875	5745.038	6.530	Pass
802.11ac (20MHz)	5785	Ant1	5776.200	5793.925	5785.063	10.800	Pass
802.11ac (20MHz)	5785	Ant2	5776.158	5793.933	5785.046	7.920	Pass
802.11ac (20MHz)	5825	Ant1	5816.292	5833.925	5825.108	18.600	Pass
802.11ac (20MHz)	5825	Ant2	5816.250	5833.883	5825.067	11.440	Pass
802.11ac (40MHz)	5755	Ant1	5736.895	5773.270	5755.083	14.340	Pass
802.11ac (40MHz)	5755	Ant2	5736.895	5773.255	5755.075	13.030	Pass
802.11ac (40MHz)	5795	Ant1	5776.910	5813.285	5795.098	16.820	Pass

802.11ac (40MHz)	5795	Ant2	5776.880	5813.255	5795.068	11.650	Pass
802.11ac (80MHz)	5775	Ant1	5736.833	5813.333	5775.083	14.430	Pass
802.11ac (80MHz)	5775	Ant2	5736.800	5813.400	5775.100	17.320	Pass
802.11a (20MHz)	5745	Ant1	5736.858	5753.233	5745.046	7.980	Pass
802.11a (20MHz)	5745	Ant2	5736.875	5753.233	5745.054	9.430	Pass
802.11a (20MHz)	5785	Ant1	5776.858	5793.242	5785.050	8.640	Pass
802.11a (20MHz)	5785	Ant2	5776.875	5793.225	5785.050	8.640	Pass
802.11a (20MHz)	5825	Ant1	5816.792	5833.242	5825.017	2.860	Pass
802.11a (20MHz)	5825	Ant2	5816.808	5833.233	5825.021	3.580	Pass

Note:The worst data reported only.

** END OF REPORT **