FCC AND ISED TEST REPORT

For

Peerless Industries, Inc.

Wireless HD multimedia system

Test Model: HDS-WHDI100

Additional Model No. : /

Prepared for	:	Peerless Industries, Inc.
Address	:	2300 White Oak Circle, Aurora, Illinois 60502, United States

Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
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Web	:	www.LCS-cert.com
Mail	:	webmaster@LCS-cert.com

Date of receipt of test sample	:	October 20, 2017
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	October 20, 2017~ November 17, 2017
Date of Report	:	November 17, 2017

FCC AND ISED TEST REPORT

FCC CFR 47 PART 15 E(15.407) / RSS-247 Issue 2 / RSS-Gen Issue 4

Report Reference No.	**:**	**LCS171020002AE1**
Date of Issue	:	November 17, 2017
Testing Laboratory Name.....	**:**	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address	:	1F., Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name	**:**	**Peerless Industries, Inc.**
Address	:	2300 White Oak Circle, Aurora, Illinois 60502, United States
Test Specification		
Standard.....	:	FCC CFR 47 PART 15 E(15.407) / ANSI C63.10: 2013 / RSS-247 Issue 2
Test Report Form No.....	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF.....	:	Dated 2011-03

Test Item Description.....	**:**	**Wireless HD multimedia system**
Trade Mark	:	peerless-AV
Test Model.....	:	HDS-WHDI100
Ratings	:	DC 5V/3.1A supplied by power adapter Adapter input: 100~240VAC, 50/60Hz, 0.6A
Result	:	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Calvin Weng	Dick Su	Gavin Liang
Calvin Weng/ Administrators	Dick Su/ Technique principal	Gavin Liang/ Manager

FCC AND ISED -- TEST REPORT

Test Report No. : **LCS171020002AE1**	November 17, 2017 Date of issue

Test Model.....	: HDS-WHDI100
EUT.....	: Wireless HD multimedia system
Applicant.....	**: Peerless Industries, Inc.**
Address.....	: 2300 White Oak Circle, Aurora, Illinois 60502, United States
Telephone.....	: /
Fax.....	: /
Factory.....	**: Shenzhen Lenkeng Technology Co., Ltd**
Address.....	: West 3F/4F, Jinguangxia Culture & Tech Park, 3 Guangxia Road, Shenzhen, Guangdong, China
Telephone.....	: /
Fax.....	: /
Factory.....	**: Shenzhen Lenkeng Technology Co., Ltd**
Address.....	: West 3F/4F, Jinguangxia Culture & Tech Park, 3 Guangxia Road, Shenzhen, Guangdong, China
Telephone.....	: /
Fax.....	: /

Test Result	**Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Revision	Issue Date	Revisions	Revised By
00	November 17, 2017	Initial Issue	Gavin Liang

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Wireless HD multimedia system
Test Model	:	HDS-WHDI100
List Model No.	:	N/A
Model Declaration	:	N/A
PMN	:	Wireless HD multimedia system
HVIN	:	HDS-WHDI100
FVIN	:	N/A
HMN	:	N/A
Power Supply	:	DC 5V/3.1A supplied by power adapter Adapter input: 100~240VAC, 50/60Hz, 0.6A
Frequency Range	:	5745.00 MHz - 5825.00 MHz
Channel Number	:	9 Channels for 20MHz Bandwidth 5 Channels for 40MHz Bandwidth
Hardware Version	:	VER1.0
Hardware Version	:	VER1.0
Modulation Technology	:	IEEE 802.11a / IEEE 802.11n HT20 / IEEE 802.11n HT40: OFDM
Antenna Type And Gain	:	External Antenna, 5.0dBi (Max.)
Directional Gain	:	G+10log(N) = 5.00 + 10log(2) = 8.01 dBi

1.2. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
Mass Power Electronic Limited	Power Adapter	NBS24E050310 D5	---	FCC VoC

1.3. External I/O

I/O Port Description	Quantity	Cable
IR IN	1	1m unshielded cable
HDMI	3	N/A
DC in Port	1	1.2m unshielded cable

1.4. Description of Test Facility

The CNAS Registration Number is L4595.
FCC Registration Number is 899208.
Industry Canada Registration Number is 9642A-1.
ESMD Registration Number is ARCB0108.
UL Registration Number is 100571-492.
TUV SUD Registration Number is SCN1081.
TUV RH Registration Number is UA 50296516-001
NVLAP Registration Code is 600167-0

3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

1.5. List Of Measuring Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Power Sensor	R&S	NRV-Z81	100458	2017-06-18	2018-06-17
2	Power Sensor	R&S	NRV-Z32	10057	2017-06-18	2018-06-17
3	Power Meter	R&S	NRVS	100444	2017-06-18	2018-06-17
4	DC Filter	MPE	23872C	N/A	2017-06-18	2018-06-17
5	RF Cable	Harbour Industries	1452	N/A	2017-06-18	2018-06-17
6	SMA Connector	Harbour Industries	9625	N/A	2017-06-18	2018-06-17
7	Spectrum Analyzer	Agilent	N9020A	MY50510140	2017-10-22	2018-10-21
8	Signal analyzer	Agilent	E4448A(External mixers to 40GHz)	US44300469	2017-06-16	2018-06-15
9	RF Cable	Hubersuhner	Sucoflex104	FP2RX2	2017-06-18	2018-06-17
10	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2017-06-18	2018-06-17
11	Amplifier	SCHAFFNER	COA9231A	18667	2017-04-18	2018-04-17
12	Amplifier	Agilent	8449B	3008A02120	2017-04-18	2018-04-17
13	Amplifier	MITEQ	AMF-6F-260400	9121372	2017-04-18	2018-04-17
14	Loop Antenna	R&S	HFH2-Z2	860004/001	2017-04-18	2018-04-17
15	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2017-04-18	2018-04-17
16	Horn Antenna	EMCO	3115	6741	2017-04-18	2018-04-17
17	Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	2017-04-18	2018-04-17
18	RF Cable-R03m	Jye Bao	RG142	CB021	2017-06-18	2018-06-17
19	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2017-06-18	2018-06-17
20	EMI Test Receiver	R&S	ESCI	101142	2017-06-18	2018-06-17
21	Artificial Mains	R&S	ENV216	101288	2017-06-18	2018-06-17
22	EMI Test Software	AUDIX	E3	N/A	2017-06-18	2018-06-17

1.6. Statement of The Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.7. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	3.10dB	(1)
		30MHz~200MHz	2.96dB	(1)
		200MHz~1000MHz	3.10dB	(1)
		1GHz~26.5GHz	3.80dB	(1)
		26.5GHz~40GHz	3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	1.63dB	(1)
Power disturbance	:	30MHz~300MHz	1.60dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.8. Description Of Test Modes

The EUT has been tested under operating condition.

The EUT was set to transmit at 100% duty cycle. This test was performed with EUT in X, Y, Z position and the worst case was found when EUT in Y position.

For pre-testing, when performed power line conducted emission measurement, the input Voltage/Frequency AC 120V/60Hz and AC 240V/60Hz were used. Only recorded the worst case in this report.

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was determined to be IEEE 802.11a mode (High Channel, 5745-5825MHz Band).

Worst-case mode and channel used for 9 KHz-1000 MHz radiated emissions was determined to be IEEE 802.11a mode (High Channel, 5745-5825MHz Band).

Worst-Case data rates were utilized from preliminary testing of the Chipset, worst-case data rates used during the testing are as follows:

IEEE 802.11a Mode: MCS0, OFDM.

IEEE 802.11n HT20 Mode: MCS0, OFDM.

IEEE 802.11n HT40 Mode: MCS0, OFDM.

Support Bandwidth for 5G WIFI Part:

Bandwidth Mode	20MHz	40MHz	80MHz
IEEE 802.11a	☑	☐	☐
IEEE 802.11n HT20	☑	☐	☐
IEEE 802.11n HT40	☐	☑	☐

Channel & Frequency:

Frequency Band	Channel No.	Frequency(MHz)	Channel No.	Frequency(MHz)
UNII Band 3	149	5745	155	5775
	151	5755	159	5795
	153	5765	161	5805
	157	5785	165	5825
For IEEE 802.11a/n HT20, Channel 149, 157 and 165 were tested. For IEEE 802.11n HT40, Channel 151 and 159 were tested.				

2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

The radiated testing was performed at an antenna-to-EUT distance of 3 meters. All radiated and conducted emissions measurement was performed at Shenzhen LCS Compliance Testing Laboratory Ltd.

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to FCC and ISED's request, Test Procedure ANSI C63.10 are required to be used for this kind of device.

According to its specifications, the EUT must comply with the requirements of the Section 15.203, 15.205, 15.207, 15.209 and 15.407 under the FCC Rules Part 15 Subpart E and RSS-247, RSS-Gen under the RSS Rules.

2.3. General Test Procedures

2.3.1 Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10-2013.

3. SYSTEM TEST CONFIGURATION

3.1. Justification

The system was configured for testing in a continuous transmit condition.

3.2. EUT Exercise Software

The system was configured for testing in a continuous transmits condition and change test channels by software (artgui.exe) provided by application.

3.3. Special Accessories

No.	Equipment	Manufacturer	Model No.	Serial No.	Length	shielded/ unshielded	Notes
1	PC	Lenovo	Ideapad	A131101550	/	/	DOC
2	Power adapter	Lenovo	CPA-A090	36200414	1.00m	unshielded	DOC

3.4. Block Diagram/Schematics

Please refer to the related document

3.5. Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6. Test Setup

Please refer to the test setup photo.

4. SUMMARY OF TEST RESULTS

Applied Standard: FCC Part 15 Subpart E/ RSS-247 Issue 2 / RSS-Gen Issue 4			
FCC Rules	ISED Rules	Description of Test	Result
§15.407(a)	RSS-247 6.2.1.1 & 6.2.4.1	Maximum Conducted Output Power	Compliant
§15.407(a)	RSS-247 6.2.1.1 & 6.2.4.1	Power Spectral Density	Compliant
§15.407(e)	RSS-247 6.2.1.1 & 6.2.4.1	6dB & 26dB Bandwidth	Compliant
§15.205, §15.407(b)	RSS-247 6.2.1.2 & 6.2.4.2	Radiated Spurious Emissions and Band Edge	Compliant
§15.407(g)	RSS-Gen 6.11	Frequency Stability	See note
§15.407(h)	RSS-247 6.2.1.1 & 6.2.2.1	Transmit Power Control (TPC)	N/A
§15.207(a)	RSS-Gen 8.8	Line Conducted Emissions	Compliant
§15.203	RSS-Gen 6.7	Antenna Requirements	Compliant

Note: The customer declared frequency stability is better than 20ppm which ensures that the signal remains in the allocated bands under all operational conditions stated in the user manual.

5. TEST RESULT

5.1. On Time and Duty Cycle

5.1.1. Standard Applicable

None; for reporting purpose only.

5.1.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of the spectrum analyzer.

5.1.3. Test Procedures

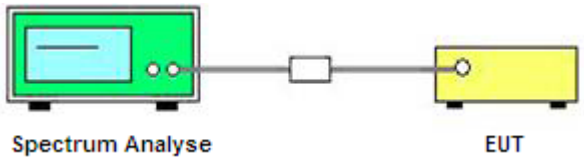
1). Set the Centre frequency of the spectrum analyzer to the transmitting frequency;

2). Set the span=0MHz, RBW=8MHz, VBW=50MHz, Sweep time=5ms;

3). Detector = peak;

4). Trace mode = Single hold.

5.1.4. Test Setup Layout



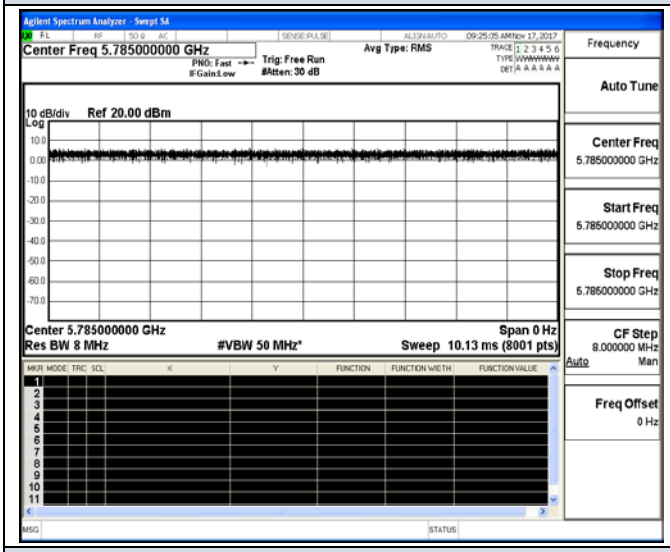
5.1.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

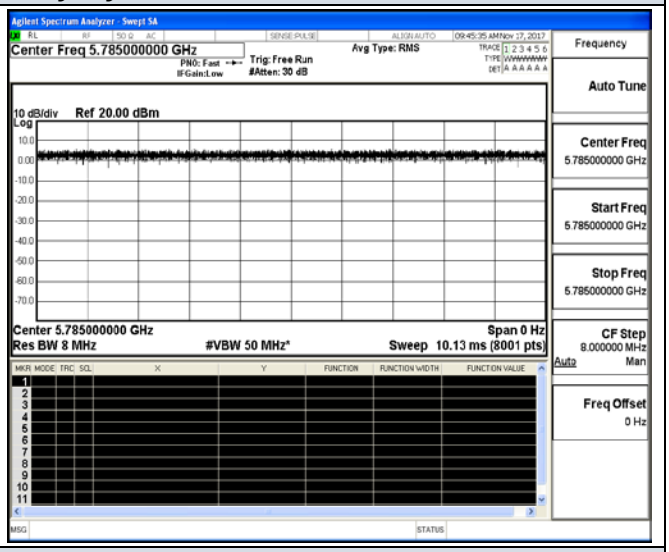
5.1.6. Test result

Mode	On Time B (ms)	Period (ms)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW KHz)
IEEE 802.11a	5.0	5.0	1	100%	0	0.01
IEEE 802.11n HT20	5.0	5.0	1	100%	0	0.01
IEEE 802.11n HT40	5.0	5.0	1	100%	0	0.01
Note: Duty Cycle Correction Factor=10log(1/Duty cycle)						

On Time and Duty Cycle



IEEE 802.11a



IEEE 802.11n HT20

IEEE 802.11n HT40

5.2. Maximum Conducted Output Power Measurement

5.2.1. Standard Applicable

Per FCC §15.407;

(1) For the band 5.15~5.25GHz

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Per RSS-247 Issue 2 section 6.4.2.1; for frequency band 5725 – 5850 MHz, the maximum conducted output power shall be not exceed 1 W.

5.2.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of the power meter.

5.2.3. Test Procedures

The transmitter output (antenna port) was connected to the power meter.

According to KDB 789033 D02 Section 3 (a) Method PM (Measurement using an RF average power meter):

(i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

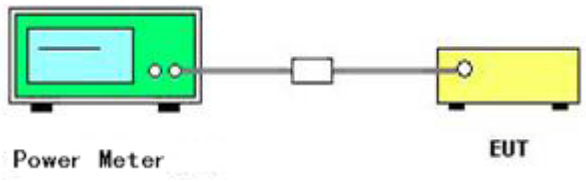
- The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
- At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
- The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

(ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section II.B.

(iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

(iv) Adjust the measurement in dBm by adding 10 log (1/x) where x is the duty cycle (e.g., 10 log (1/0.25) if the duty cycle is 25%).

5.2.4. Test Setup Layout



5.2.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

5.2.6. Test Result of Maximum Conducted Output Power

Temperature	25℃	Humidity	60%
Test Engineer	Jayden Zhuo	Configurations	IEEE 802.11a/n

Mode	Channel	Frequency (MHz)	AVG Conducted Power (dBm)			Duty cycle factor	Report Conducted Power (dBm)			Max. Limit (dBm)	Result
			Ant 0	Ant 1	Sum		Ant 0	Ant 1	Sum		
IEEE 802.11a	149	5745	11.32	10.04	/	0.00	11.32	10.04	/	30.00	Complies
	157	5785	11.62	10.15	/	0.00	11.62	10.15	/	30.00	Complies
	165	5825	11.98	10.62	/	0.00	11.98	10.62	/	30.00	Complies
IEEE 802.11n HT20	149	5745	11.21	9.91	13.62	0.00	11.21	9.91	13.62	30.00	Complies
	157	5785	11.36	10.15	13.81	0.00	11.36	10.15	13.81	30.00	Complies
	165	5825	11.76	10.57	14.22	0.00	11.76	10.57	14.22	30.00	Complies
IEEE 802.11n HT40	151	5755	11.63	10.26	14.01	0.00	11.63	10.26	14.01	30.00	Complies
	159	5795	12.05	10.74	14.46	0.00	12.05	10.74	14.46	30.00	Complies

Remark:

1. *Measured output power at difference data rate for each mode and recorded worst case for each mode.*
2. *Test results including cable loss;*
3. *Worst case data at MCS0 at IEEE 802.11a; MCS0 at IEEE 802.11n HT20; MCS0 at IEEE 802.11n HT40;*
4. *Report conducted power = Measured conducted average power + Duty Cycle factor;*

5.3. Power Spectral Density Measurement

5.3.1. Standard Applicable

Per FCC §15.407;

For 5.15~5.25GHz

(i) For an outdoor access point operating in the band 5.15 - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band.note1
(ii) For an indoor access point operating in the band 5.15 - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band.note1
(iii) For fixed point-to-point access points operating in the band 5.15 - 5.25 GHz, transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
(iv) For mobile and portable client devices in the 5.15 - 5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band. note1
Note1: If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For 5725~5850MHz

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Per RSS-247 Issue 2 section 6.4.2.1; for frequency band 5725 – 5850 MHz, the output power spectral density shall not exceed 30 dBm in any 500 KHz band.

5.3.2. Measuring Instruments and Setting

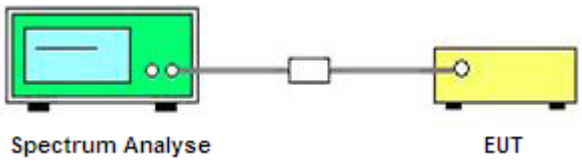
Please refer to equipment list in this report. The following table is the setting of Spectrum Analyzer.

5.3.3. Test Procedures

1). The transmitter was connected directly to a Spectrum Analyzer through a directional couple.
2). The power was monitored at the coupler port with a Spectrum Analyzer. The power level was set to the maximum level.
3). Set the RBW = 300 kHz
4). Set the VBW ≥ 3*RBW
5). Span=Encompass the entire emissions bandwidth (EBW) of the signal
6). Detector = RMS.
7). Sweep time = auto couple.
8). Trace mode = max hold.
9). Allow trace to fully stabilize.
10). If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
11). If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
12). Care must be taken to ensure that the measurements are performed during a period of continuous

transmission or are corrected upward for duty cycle.

5.3.4. Test Setup Layout



5.3.5. EUT Operation during Test

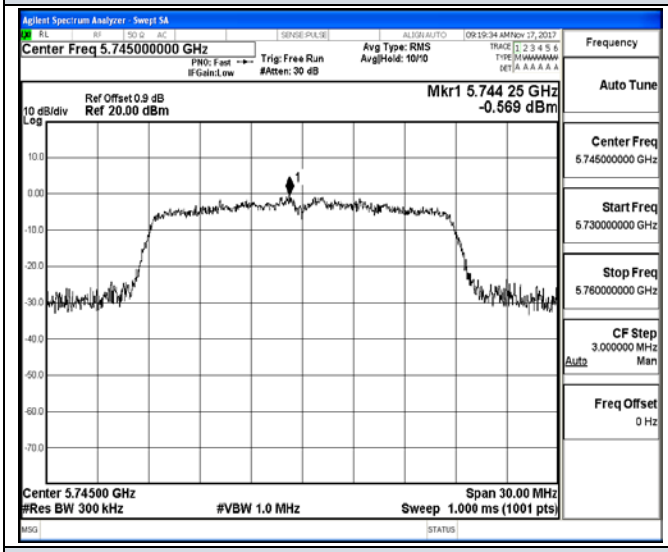
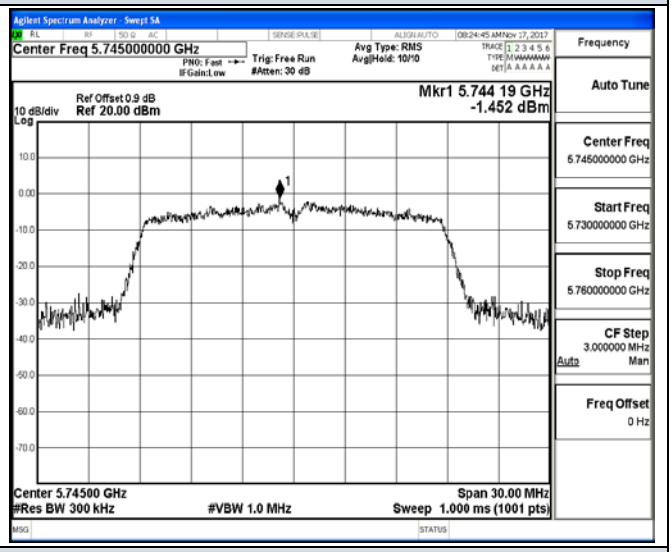
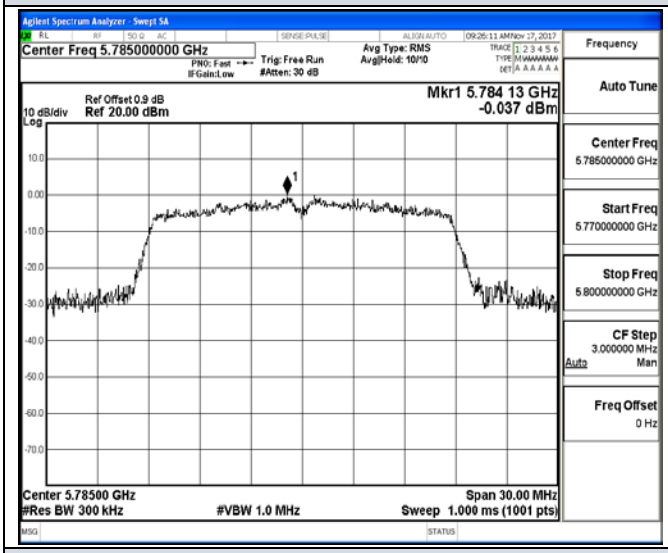
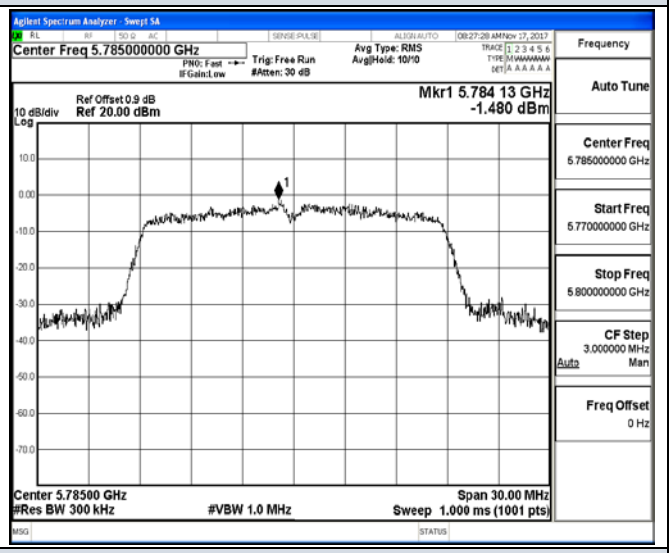
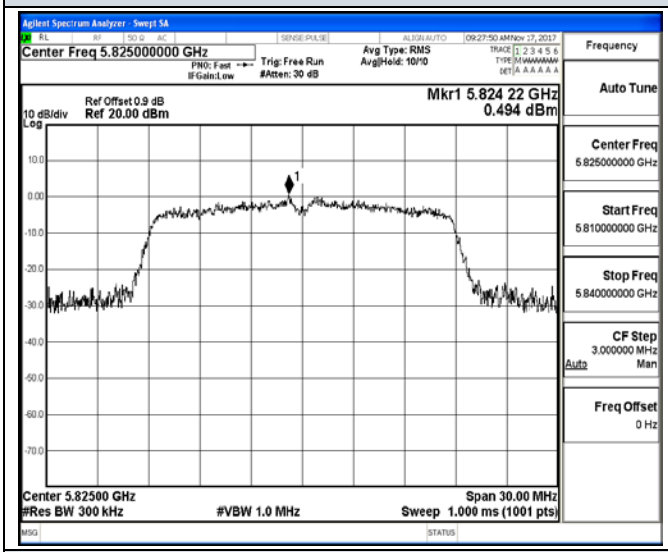
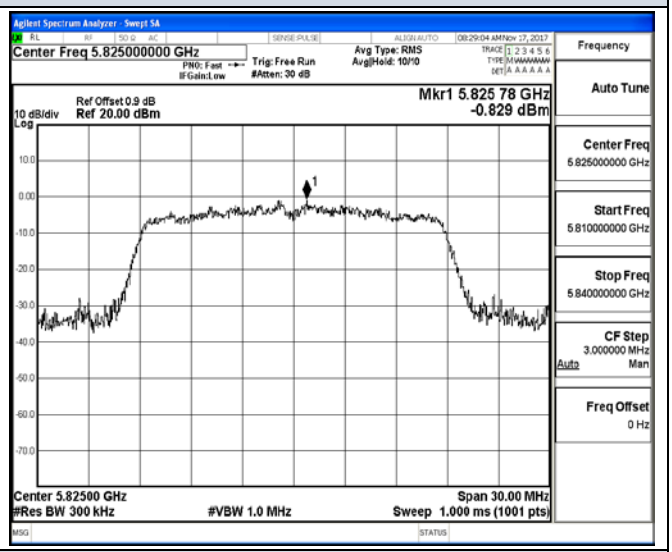
The EUT was programmed to be in continuously transmitting mode.

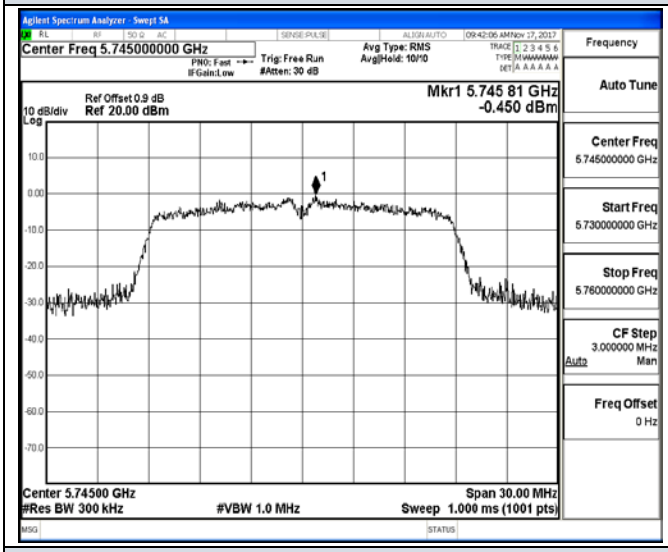
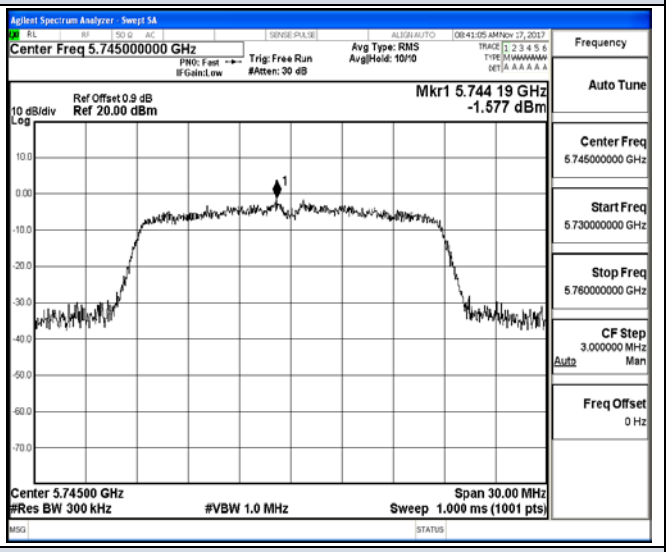
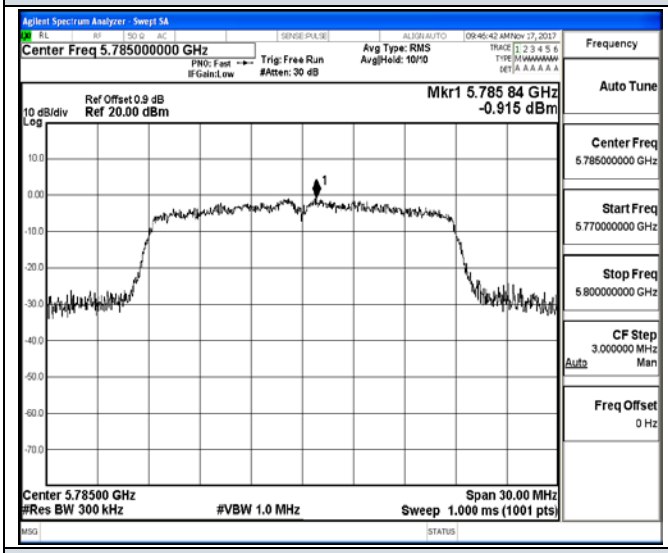
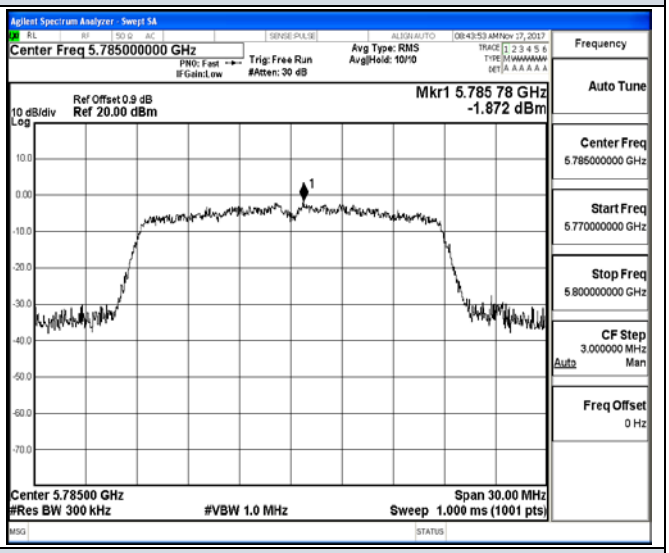
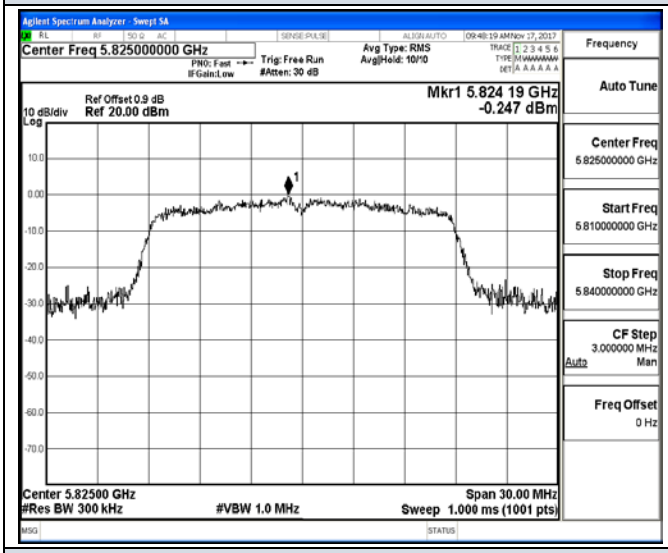
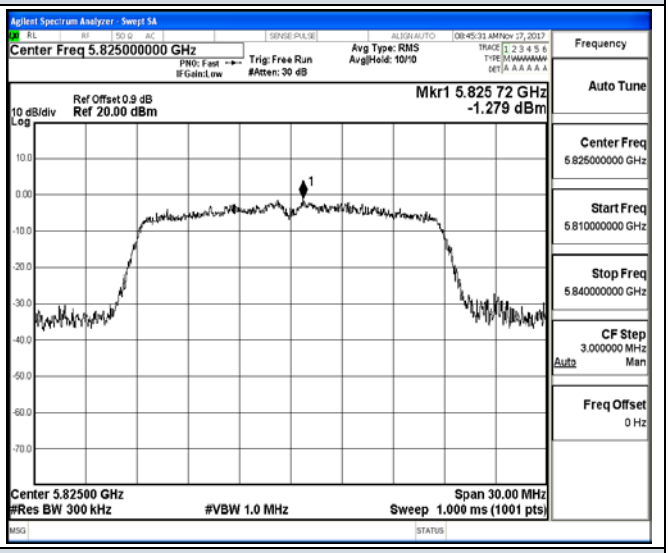
5.3.6. Test Result of Power Spectral Density

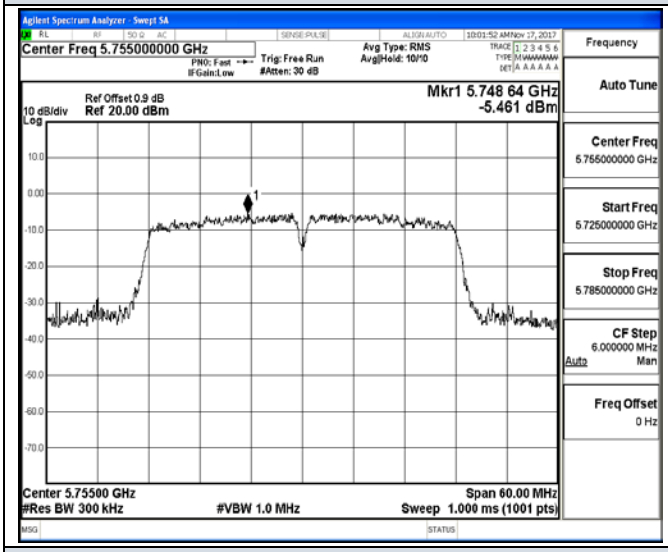
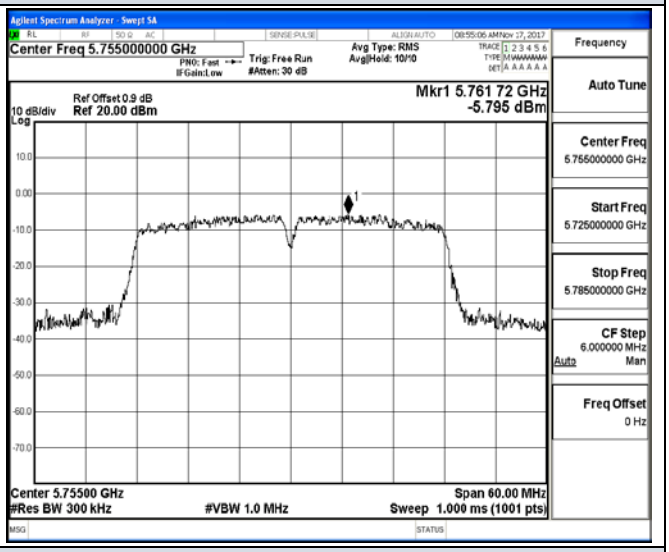
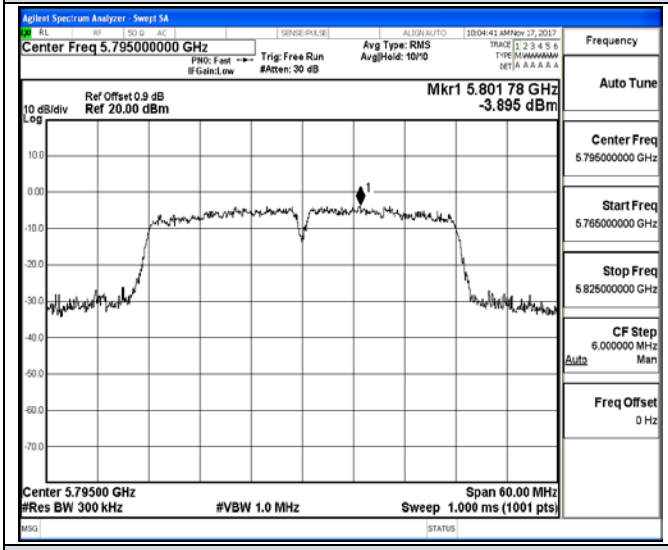
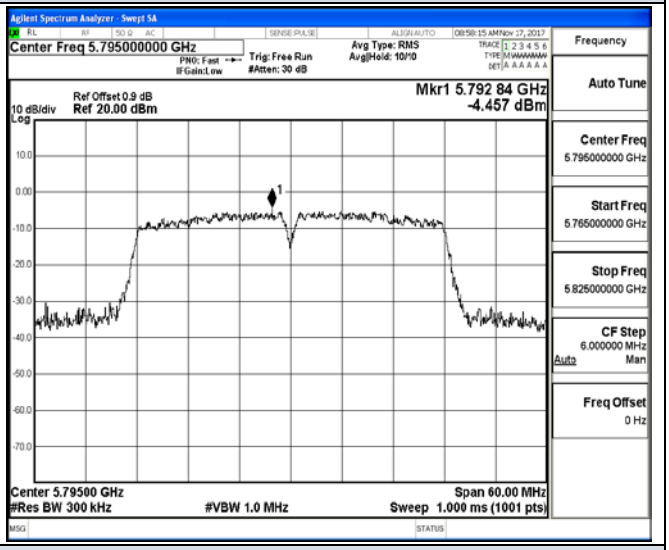
Mode	Channel	Frequency (MHz)	Power Density (dBm/300KHz)			Duty cycle factor	RBW factor (dB)	Report conducted PSD dBm/500KHz)			Max. Limit (dBm)	Result
			Ant 0	Ant 1	Sum			Ant 0	Ant 1	Sum		
IEEE 802.11a	149	5745	-0.569	-1.452	/	0.000	2.218	1.649	0.766	/	30.00	Complies
	157	5785	-0.037	-1.480	/	0.000	2.218	2.181	0.738	/	30.00	Complies
	165	5825	0.049	-0.829	/	0.000	2.218	2.267	1.389	/	30.00	Complies
IEEE 802.11n HT20	149	5745	-0.450	-1.577	2.033	0.000	2.218	1.768	0.641	4.251	27.99	Complies
	157	5785	-0.915	-1.872	1.643	0.000	2.218	1.303	0.346	3.861	27.99	Complies
	165	5825	-0.247	-1.279	2.278	0.000	2.218	1.971	0.939	4.496	27.99	Complies
IEEE 802.11n HT40	151	5755	-5.461	-5.795	-2.614	0.000	2.218	-3.243	-3.577	-0.396	27.99	Complies
	159	5795	-3.895	-4.457	-1.157	0.000	2.218	-1.677	-2.239	1.061	27.99	Complies

Remark:

1. *Measured power spectrum density at difference data rate for each mode and recorded worst case for each mode.*
2. *Test results including cable loss;*
3. *Worst case data at MCS0;*
4. *Report conducted PSD = measured conducted PSD + Duty Cycle factor + RBW factor;*
5. *RBW factor = 10 log (500 KHz / 300 KHz) = 2.218 dB;*
6. *Emission Limit = 30.00 – (5.00+10log(2) - 6.00) = 27.99 dBm;*
7. *Please refer to following test plots;*

Power Spectral Density	
IEEE 802.11a	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

Power Spectral Density	
IEEE 802.11n HT20	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

Power Spectral Density	
IEEE 802.11n HT40	
Antenna 0	Antenna 1
	
Channel 151 / 5755 MHz	Channel 151 / 5755 MHz
	
Channel 159 / 5795 MHz	Channel 159 / 5795 MHz

5.4. 6dB Occupied Bandwidth Measurement

5.4.1. Standard Applicable

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Per RSS-247 Issue 2 section 6.2.4.1 for equipment operating in the band 5725-5850 MHz, the minimum 6 dB bandwidth shall be at least 500 kHz.

5.4.2. Measuring Instruments and Setting

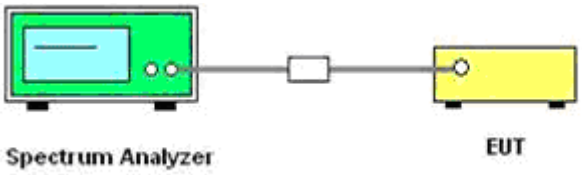
Please refer to equipment list in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span	> 26dB Bandwidth
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The resolution bandwidth of 100 KHz and the video bandwidth of 300 KHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

5.4.4. Test Setup Layout



5.4.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

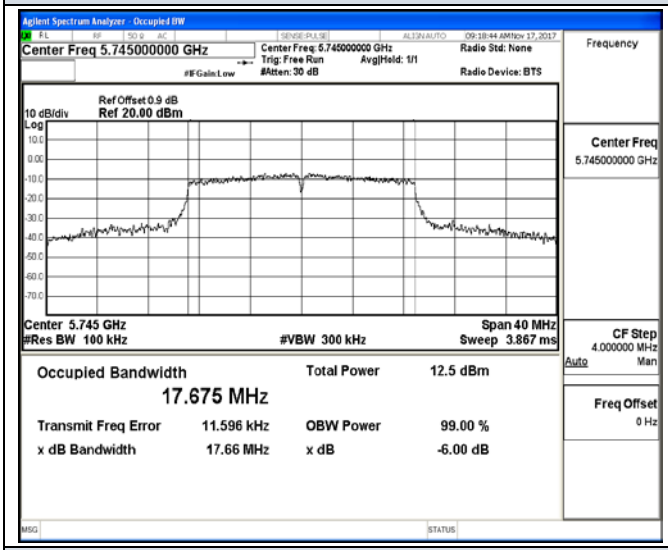
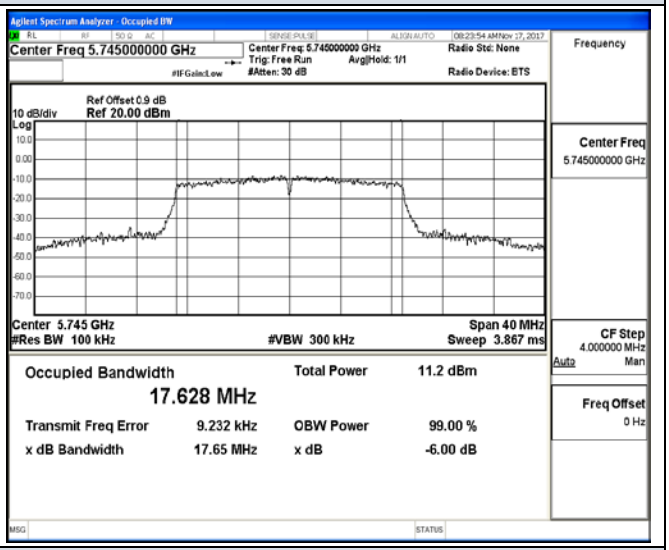
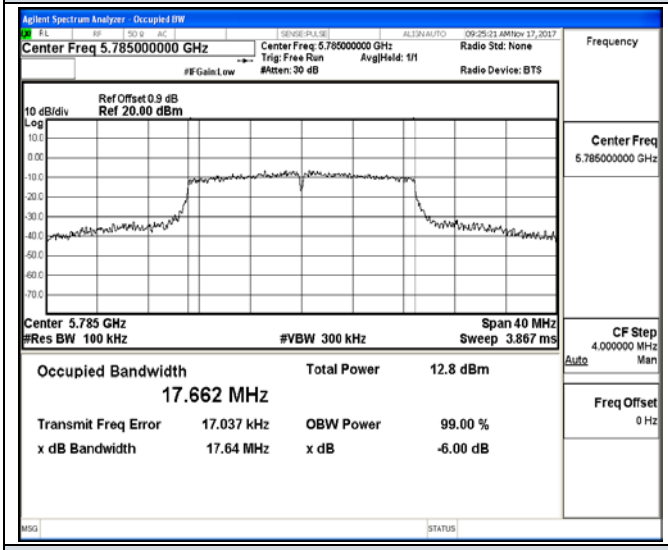
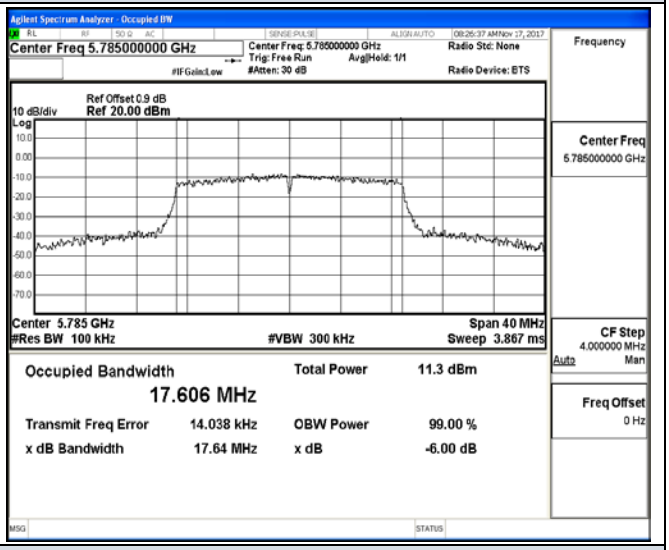
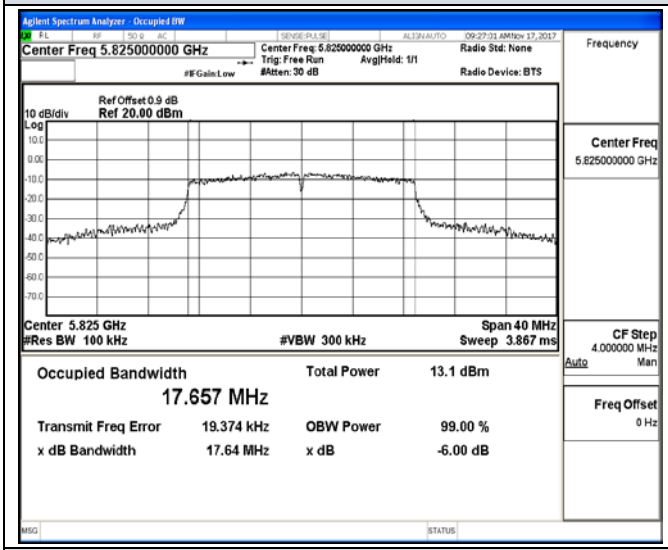
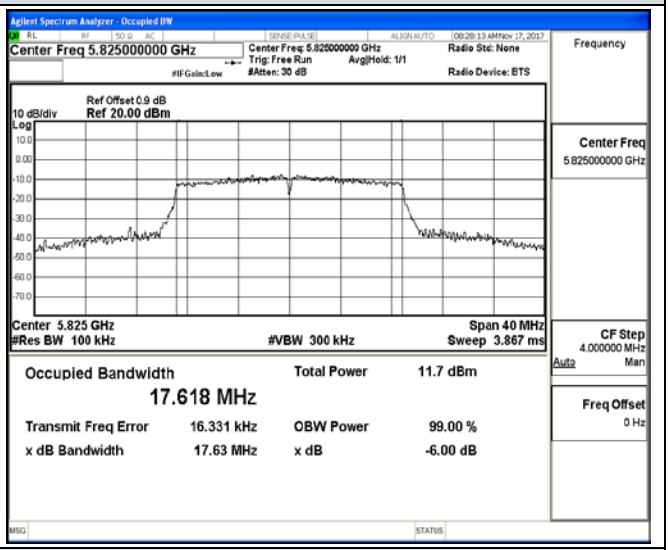
5.4.6. Test Result of 6dB Occupied Bandwidth

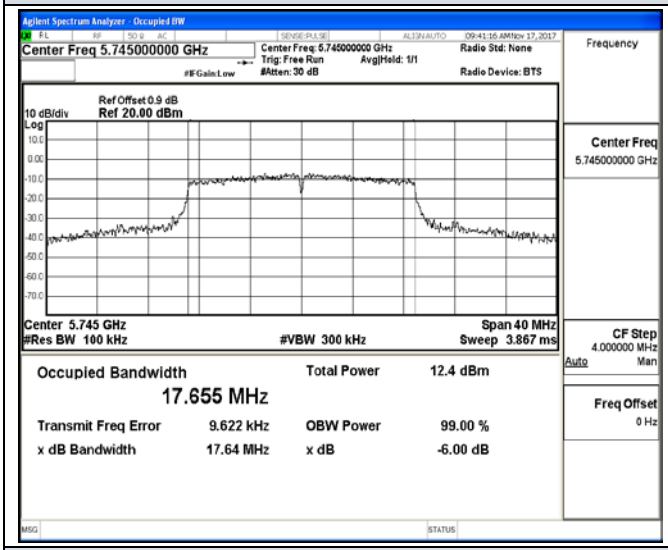
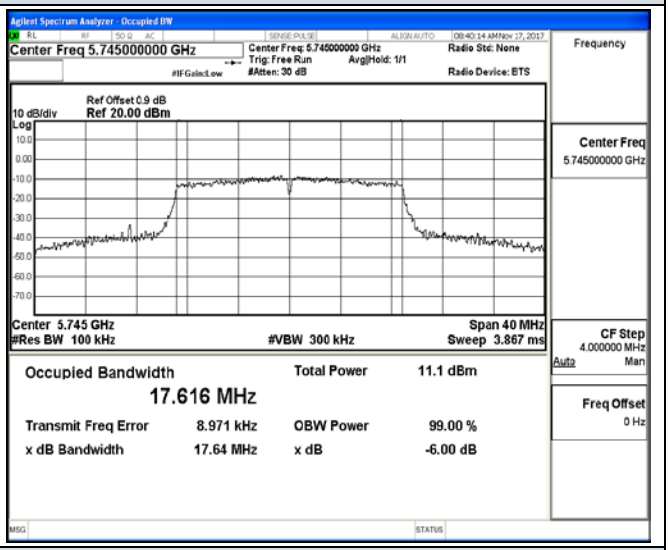
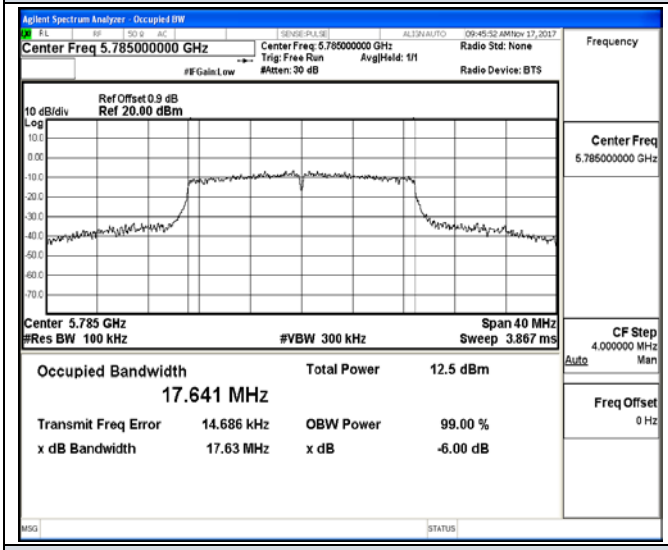
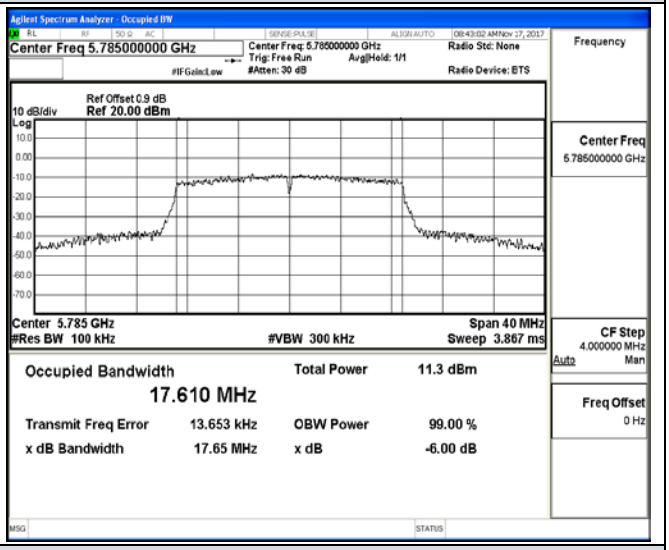
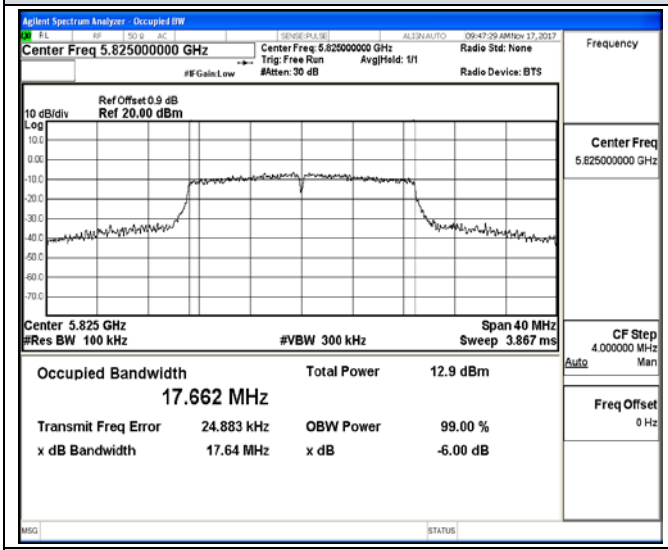
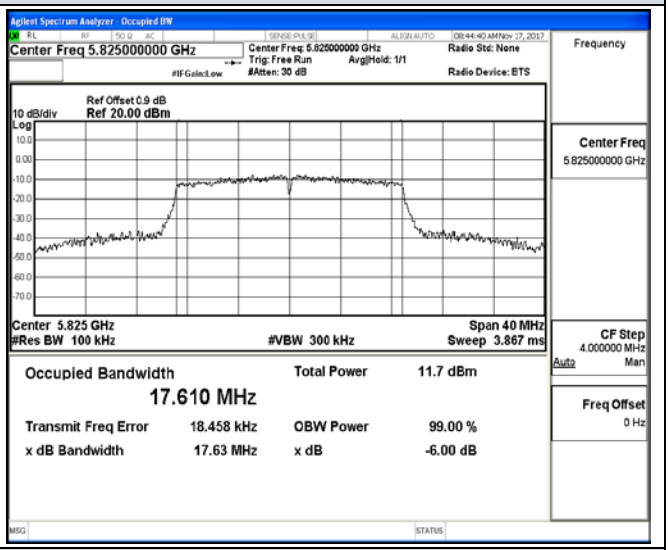
Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limits (MHz)	Verdict
			Antenna 0	Antenna 1		
IEEE 802.11a	149	5745	17.660	17.650	0.5000	Complies
	157	5785	17.640	17.640		
	165	5825	17.640	17.630		
IEEE 802.11n HT20	149	5745	17.640	17.640	0.5000	Complies
	157	5785	17.630	17.650		
	165	5825	17.640	17.630		
IEEE 802.11n HT40	151	5755	36.400	36.380	0.5000	Complies
	159	5795	36.380	36.180		

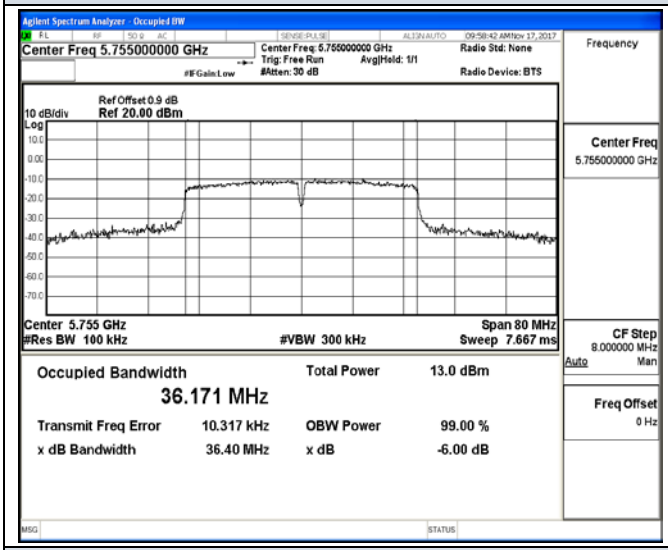
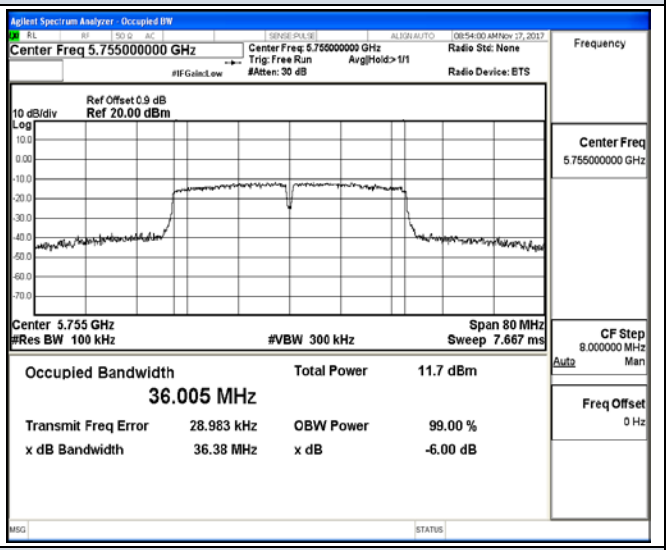
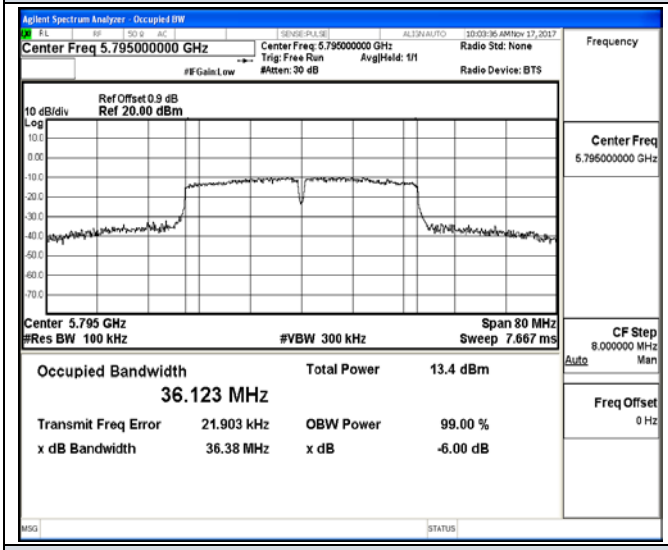
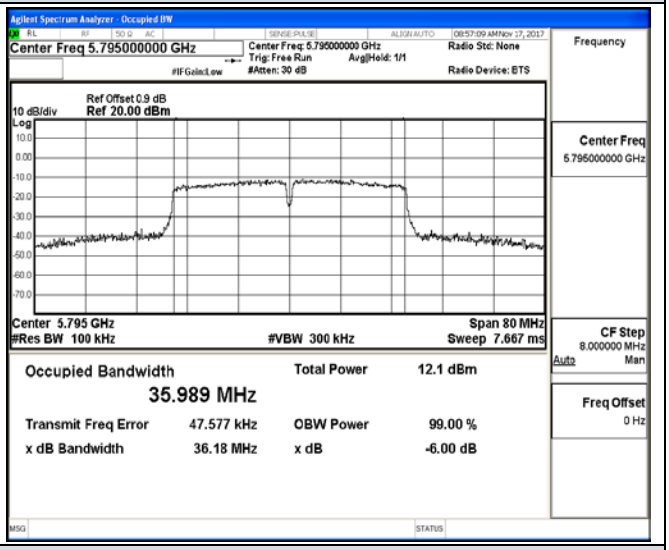
Remark:

1. *Measured 6dB bandwidth at difference data rate for each mode and recorded worst case for each mode.*
2. *Test results including cable loss;*

3. *Worst case data at MCS0 at IEEE 802.11a, MCS0 at IEEE 802.11n HT20, MCS0 at IEEE 802.11n HT40;*
4. *Please refer to following test plots;*

6dB Bandwidth	
IEEE 802.11a	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

6dB Bandwidth	
IEEE 802.11n HT20	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

6dB Bandwidth	
IEEE 802.11n HT40	
Antenna 0	Antenna 1
	
Channel 151 / 5755 MHz	Channel 151 / 5755 MHz
	
Channel 159 / 5795 MHz	Channel 159 / 5795 MHz

5.5. 99% Occupied Bandwidth Measurement

5.5.1. Standard Applicable

No restriction limits. But resolution bandwidth within band edge measurement is 1% of the 99% occupied bandwidth.

99% occupied bandwidth not applicable for UNII Band 3;

5.5.2. Measuring Instruments and Setting

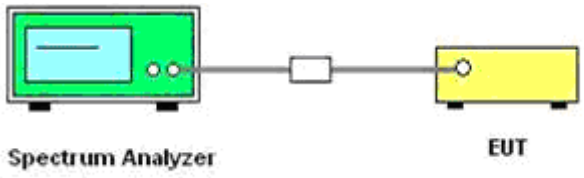
Please refer to equipment list in this report. The following table is the setting of the Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span	> 26dB Bandwidth
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.5.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.
2. The RBW = 1% - 3% of occupied bandwidth, VBW = 3*RBW;
3. Measured the spectrum width with power higher than 26dB below carrier.

5.5.4. Test Setup Layout



5.5.5. EUT Operation during Test

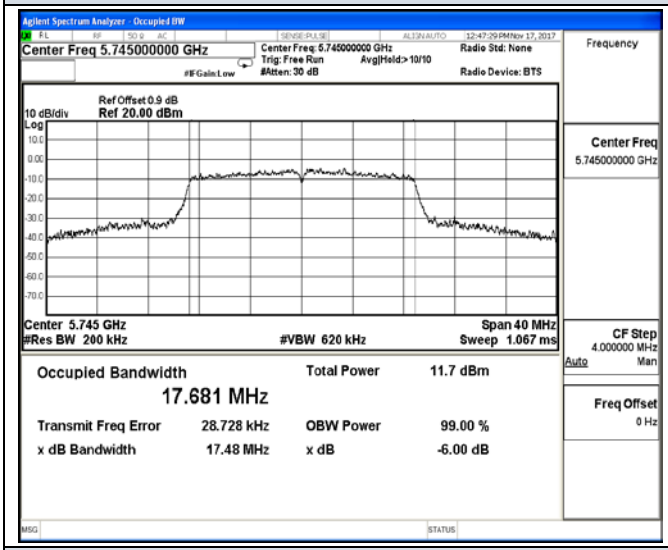
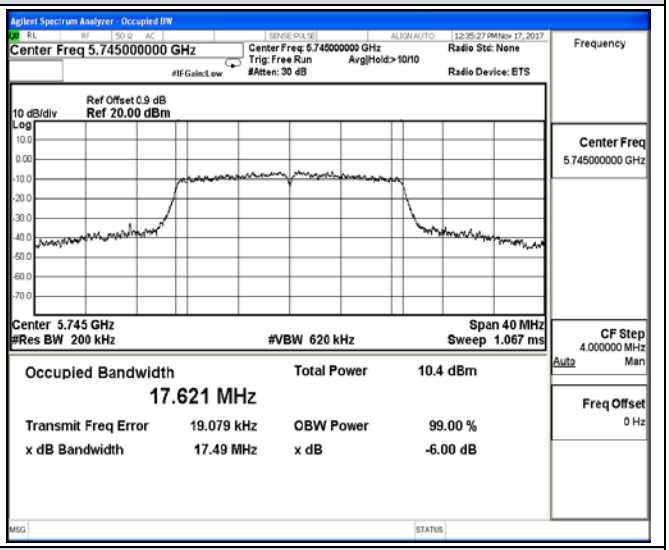
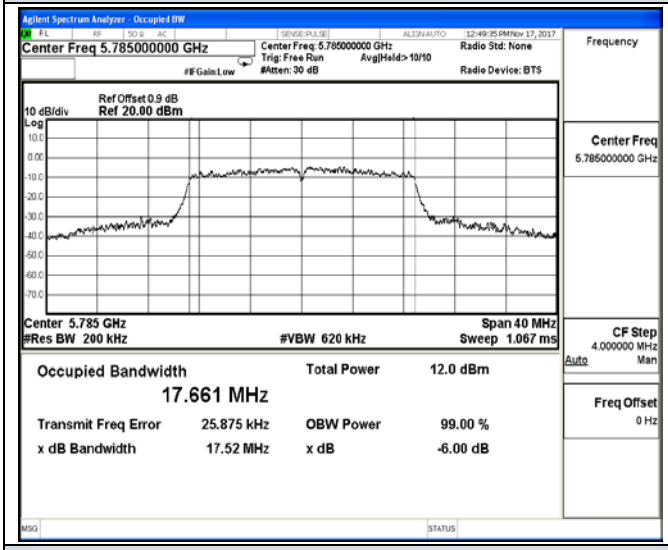
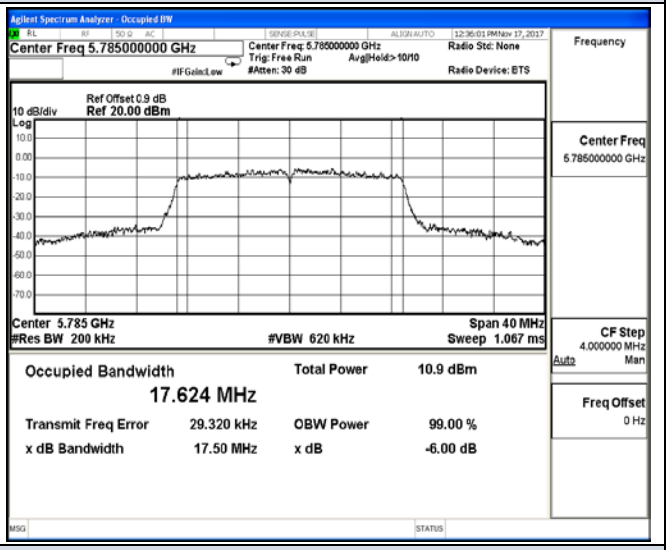
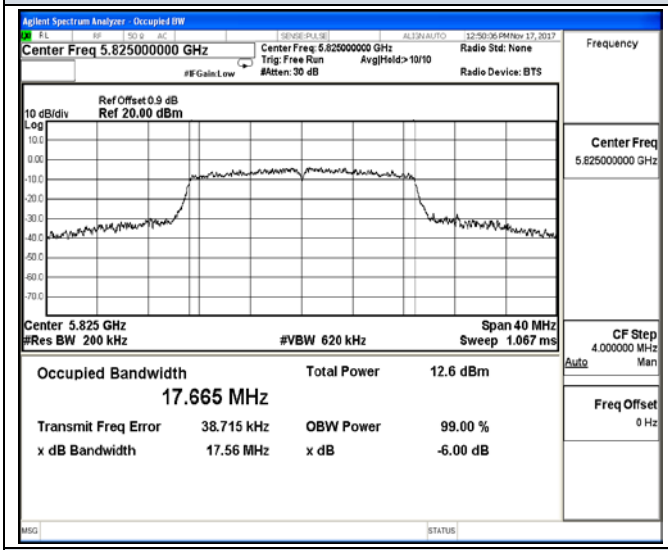
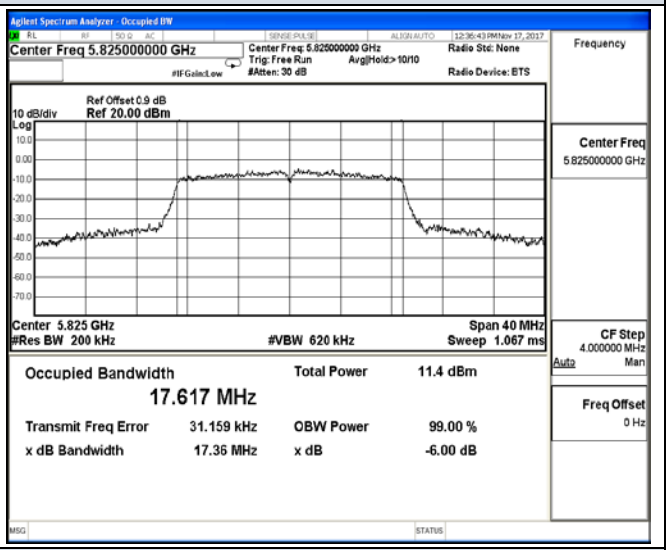
The EUT was programmed to be in continuously transmitting mode.

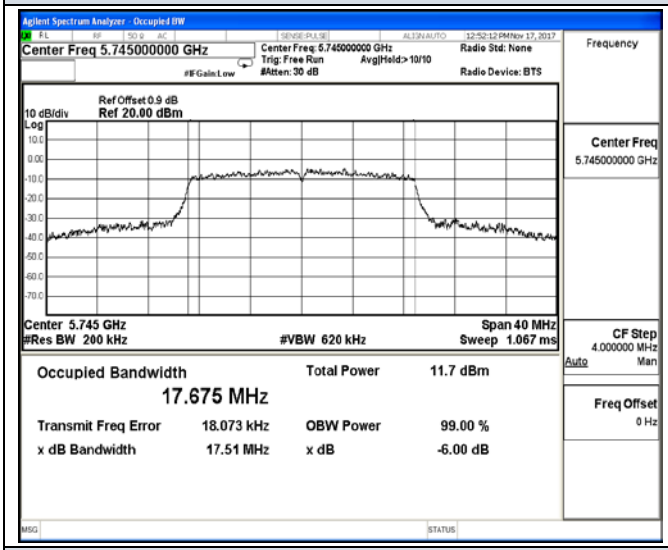
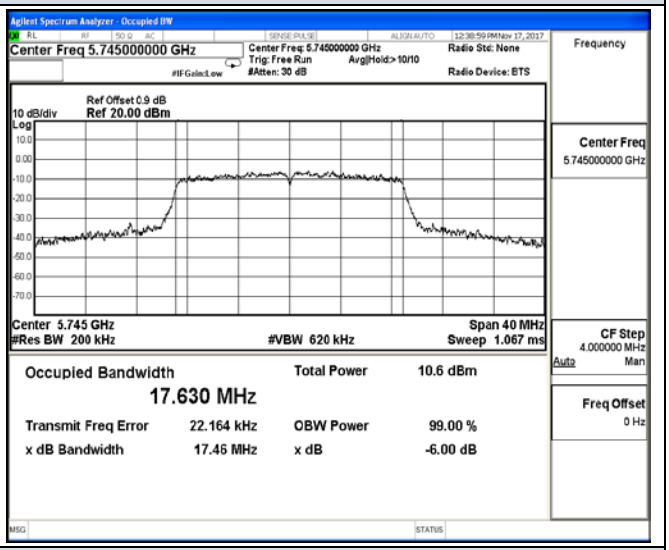
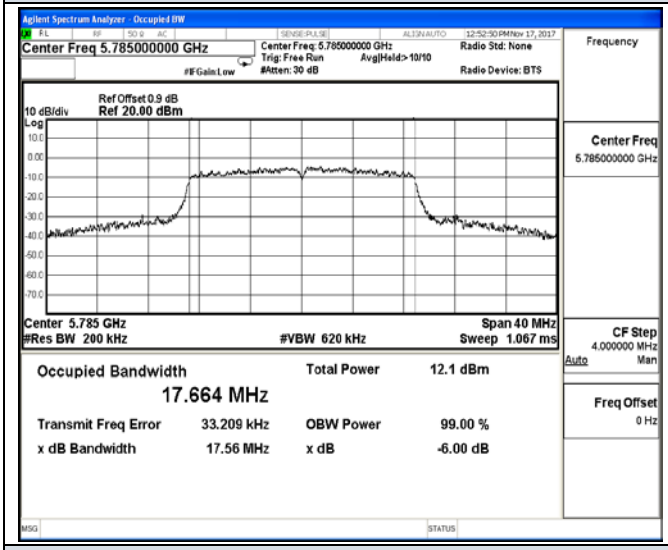
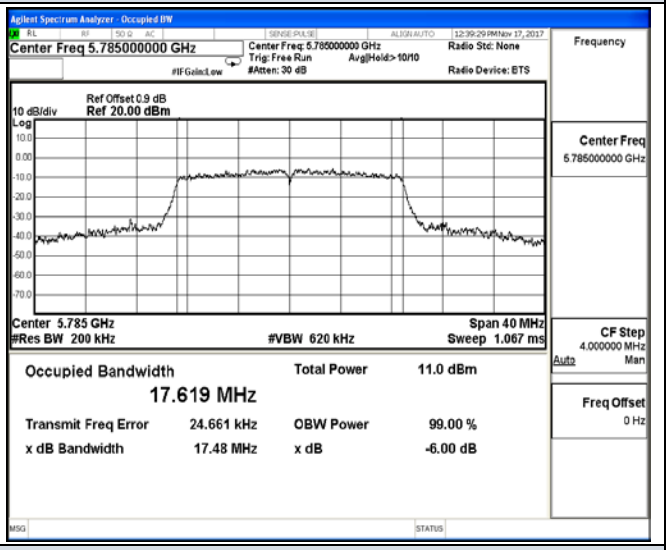
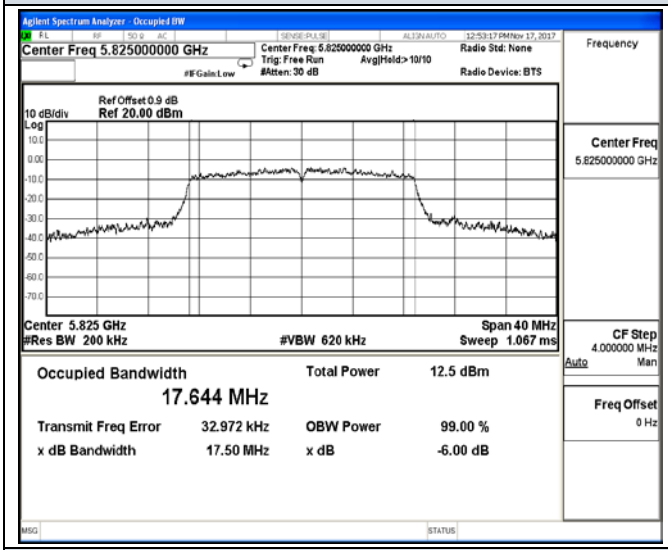
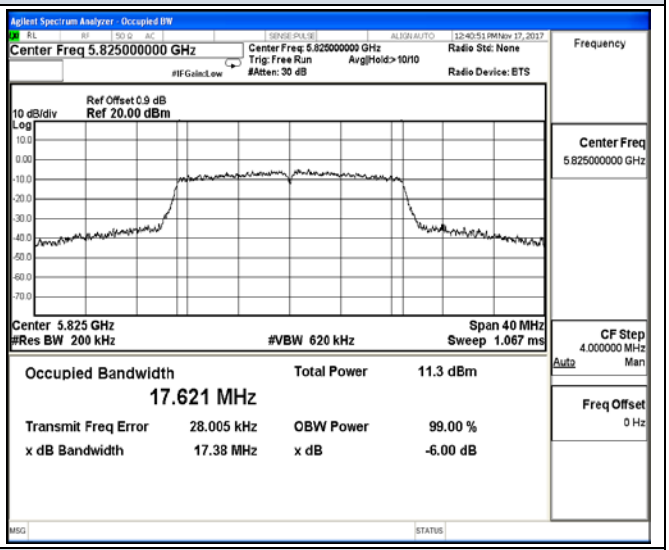
5.5.6. Test Result of 99% Occupied Bandwidth

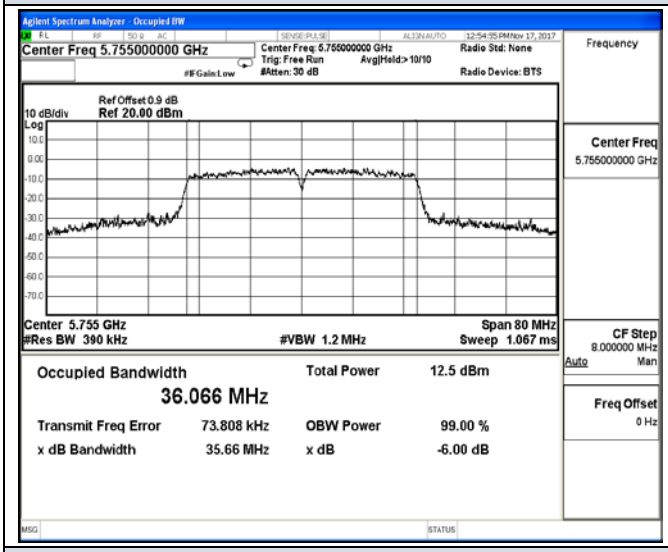
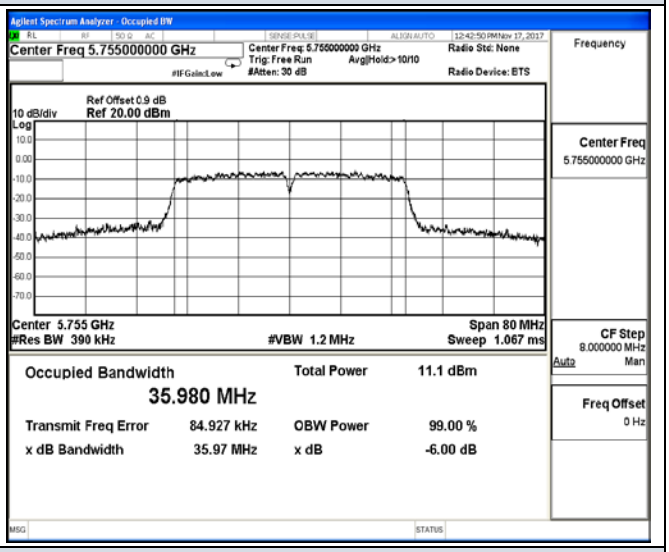
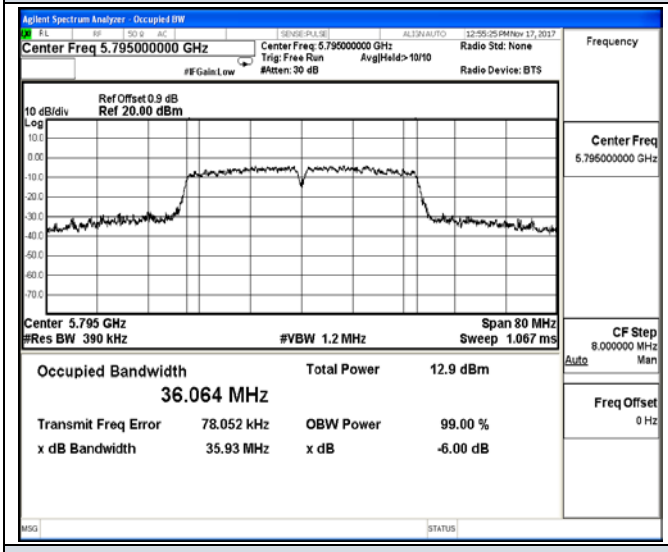
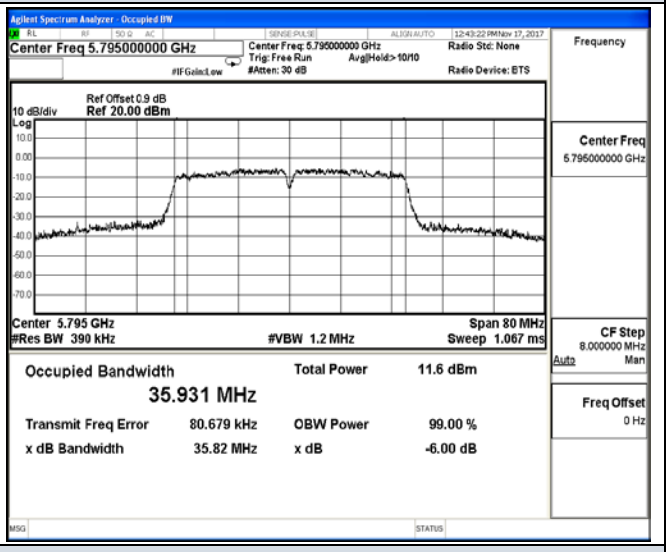
Test Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)		Limits (MHz)	Verdict
			Antenna 0	Antenna 1		
IEEE 802.11a	149	5745	17.681	17.621	No Limit	Complies
	157	5785	17.661	17.624		
	165	5825	17.665	17.617		
IEEE 802.11n HT20	149	5745	17.675	17.630	No Limit	Complies
	157	5785	17.664	17.619		
	165	5825	17.644	17.621		
IEEE 802.11n HT40	151	5755	36.066	35.980	No Limit	Complies
	159	5795	36.064	35.931		

Remark:

1. *Measured 99% and 26dB bandwidth at difference data rate for each mode and recorded worst case for each mode.*
2. *Test results including cable loss;*
3. *Worst case data at MCS0;*
4. *Please refer to following test plots;*

99% Occupied Bandwidth	
IEEE 802.11a	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

99% Occupied Bandwidth	
IEEE 802.11n HT20	
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz	Channel 149 / 5745 MHz
	
Channel 157 / 5785 MHz	Channel 157 / 5785 MHz
	
Channel 165 / 5825 MHz	Channel 165 / 5825 MHz

99% Occupied Bandwidth	
IEEE 802.11n HT40	
Antenna 0	Antenna 1
	
Channel 151 / 5755 MHz	Channel 151 / 5755 MHz
	
Channel 159 / 5795 MHz	Channel 159 / 5795 MHz

5.6. Radiated Emissions Measurement

5.6.1. Standard Applicable

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
\2\ Above 38.6

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 −27 dBm/MHz (68.2dBuV/m at 3m).

For transmitters operating in the 5.725-5.85 GHz band:

All emissions shall be limited to a level of −27 dBm/MHz(68.2dBuV/m at 3m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz(105.2dBuV/m at 3m) 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(110.8dBuV/m at 3m) 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(122.2dBuV/m at 3m) at the band edge

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
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

5.6.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB 100kHz for QP

5.6.3. Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 0.8 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Premeasurement:

--- The antenna is moved spherical over the EUT in different polarizations of the antenna.

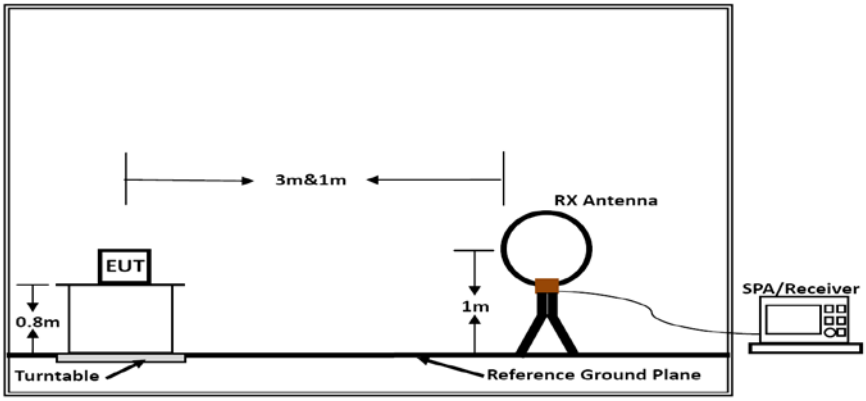
Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

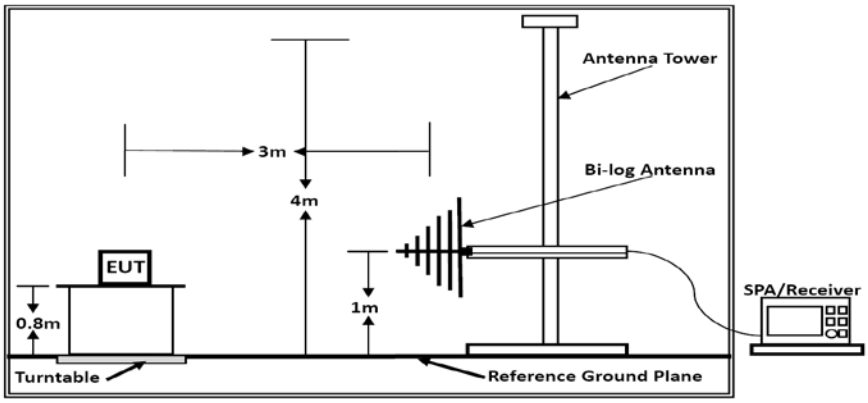
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

5.6.4. Test Setup Layout

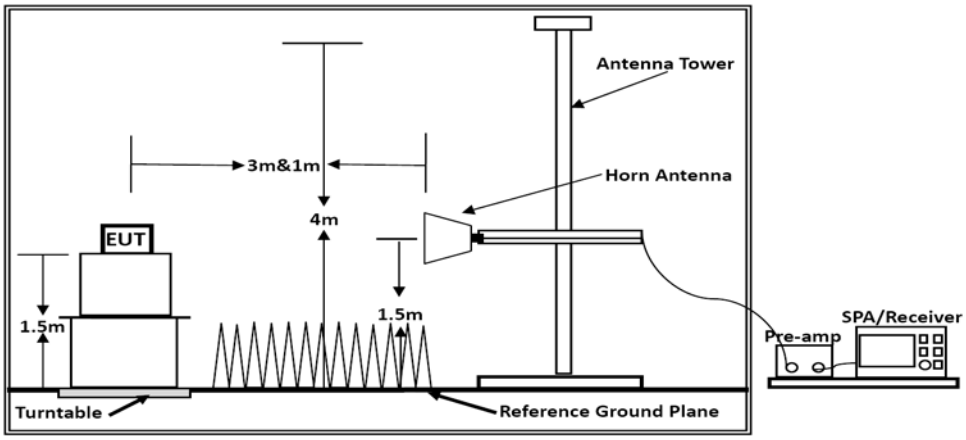
For radiated emissions below 30MHz



Below 30MHz



Below 1GHz



Above 1GHz

Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

5.6.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

5.6.6. Results of Radiated Emissions (9 KHz~30MHz)

Temperature	24.1℃	Humidity	58.1%
Test Engineer	Chaz Liu	Configurations	IEEE 802.11a/n

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Over Limit (dBuV)	Remark
-	-	-	-	See Note

Note:

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

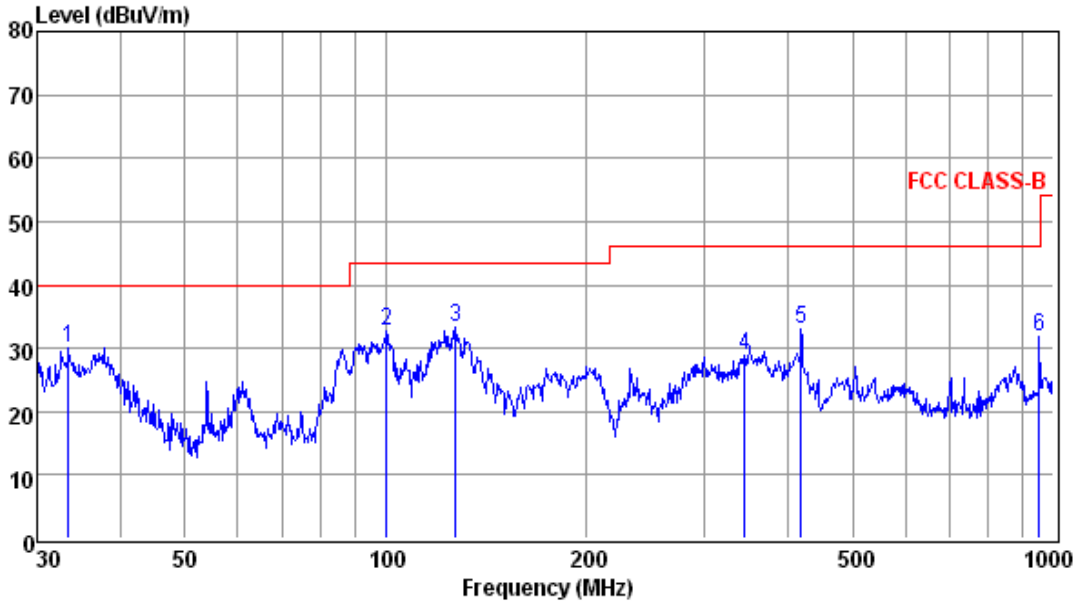
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

5.6.7. Results of Radiated Emissions (30MHz~1GHz)

Test result for UNII Band 3

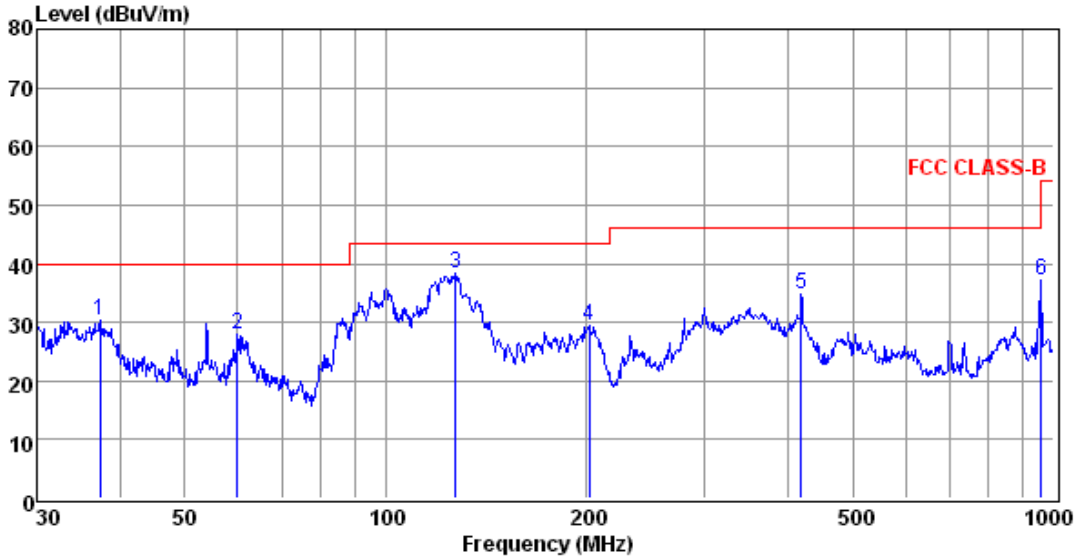
Vertical



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	33.44	17.40	0.37	12.31	30.08	40.00	-9.92	QP
2	100.23	18.93	0.60	13.14	32.67	43.50	-10.83	QP
3	127.22	23.27	0.67	9.36	33.30	43.50	-10.20	QP
4	344.39	13.40	1.13	14.19	28.72	46.00	-17.28	QP
5	419.11	16.14	1.32	15.45	32.91	46.00	-13.09	QP
6	952.09	8.40	1.93	21.43	31.76	46.00	-14.24	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Horizontal



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	37.29	16.94	0.41	12.89	30.24	40.00	-9.76	QP
2	59.86	14.88	0.49	12.70	28.07	40.00	-11.93	QP
3	127.22	28.27	0.67	9.36	38.30	43.50	-5.20	QP
4	201.39	18.14	0.82	10.61	29.57	43.50	-13.93	QP
5	419.11	18.14	1.32	15.45	34.91	46.00	-11.09	QP
6	958.79	13.71	1.90	21.47	37.08	46.00	-8.92	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note:

Pre-scan all mode and recorded the worst case results in this report (UNII Band 3, IEEE 802.11a High Channel, 5825 MHz).

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

5.6.8. Results for Radiated Emissions (Above 1GHz)

Note: Only recorded the worst test result in this report.

IEEE 802.11a @ Antenna 0

Channel 149 / 5745 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.49	46.95	33.92	36.09	10.26	55.04	74.00	-18.96	Peak	Horizontal
11.49	36.40	33.92	36.09	10.26	44.49	54.00	-9.51	Average	Horizontal
11.49	48.26	33.99	35.99	10.26	56.52	74.00	-17.48	Peak	Vertical
11.49	36.85	33.99	35.99	10.26	45.11	54.00	-8.89	Average	Vertical

Channel 157 / 5785 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.57	46.68	33.92	36.09	10.26	54.77	74.00	-19.23	Peak	Horizontal
11.57	35.79	33.92	36.09	10.26	43.88	54.00	-10.12	Average	Horizontal
11.57	47.74	33.99	35.99	10.26	56.00	74.00	-18.00	Peak	Vertical
11.57	36.44	33.99	35.99	10.26	44.70	54.00	-9.30	Average	Vertical

Channel 163 / 5825 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.65	46.57	33.92	36.09	10.26	54.66	74.00	-19.34	Peak	Horizontal
11.65	35.86	33.92	36.09	10.26	43.95	54.00	-10.05	Average	Horizontal
11.65	47.39	33.99	35.99	10.26	55.65	74.00	-18.35	Peak	Vertical
11.65	36.16	33.99	35.99	10.26	44.42	54.00	-9.58	Average	Vertical

IEEE 802.11n HT20 @ Combined Antenna 0 and Antenna 1

Channel 149 / 5745 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.49	46.94	33.92	36.09	10.26	55.03	74.00	-18.97	Peak	Horizontal
11.49	36.07	33.92	36.09	10.26	44.16	54.00	-9.84	Average	Horizontal
11.49	47.93	33.99	35.99	10.26	56.19	74.00	-17.81	Peak	Vertical
11.49	36.77	33.99	35.99	10.26	45.03	54.00	-8.97	Average	Vertical

Channel 157 / 5785 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.57	47.08	33.92	36.09	10.26	55.17	74.00	-18.83	Peak	Horizontal
11.57	36.40	33.92	36.09	10.26	44.49	54.00	-9.51	Average	Horizontal
11.57	47.98	33.99	35.99	10.26	56.24	74.00	-17.76	Peak	Vertical
11.57	36.75	33.99	35.99	10.26	45.01	54.00	-8.99	Average	Vertical

Channel 163 / 5825 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.65	46.53	33.92	36.09	10.26	54.62	74.00	-19.38	Peak	Horizontal
11.65	35.94	33.92	36.09	10.26	44.03	54.00	-9.97	Average	Horizontal
11.65	47.69	33.99	35.99	10.26	55.95	74.00	-18.05	Peak	Vertical
11.65	36.29	33.99	35.99	10.26	44.55	54.00	-9.45	Average	Vertical

IEEE 802.11n HT40 @ Combined Antenna 0 and Antenna 1

Channel 151 / 5755 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.51	50.11	33.92	36.09	10.26	58.20	74.00	-15.80	Peak	Horizontal
11.51	39.04	33.92	36.09	10.26	47.13	54.00	-6.87	Average	Horizontal
11.51	50.91	33.99	35.99	10.26	59.17	74.00	-14.83	Peak	Vertical
11.51	39.49	33.99	35.99	10.26	47.75	54.00	-6.25	Average	Vertical

Channel 159 / 5795 MHz

Freq. GHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
11.59	49.49	33.92	36.09	10.26	57.58	74.00	-16.42	Peak	Horizontal
11.59	38.79	33.92	36.09	10.26	46.88	54.00	-7.12	Average	Horizontal
11.59	50.55	33.99	35.99	10.26	58.81	74.00	-15.19	Peak	Vertical
11.59	39.36	33.99	35.99	10.26	47.62	54.00	-6.38	Average	Vertical

Notes:

1). Measuring frequencies from 9 KHz ~ 40 GHz, No emission found between lowest internal used/generated frequency to 30MHz.
2). Radiated emissions measured in frequency range from 9 KHz ~ 40 GHz were made with an instrument using Peak detector mode.
3). 18~40GHz at least have 20dB margin. No recording in the test report.
4). Worst case data at MCS0 at IEEE 802.11a, MCS0 at IEEE 802.11n HT20, MCS0 at IEEE 802.11n HT40;
5). Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

5.7. Power line conducted emissions

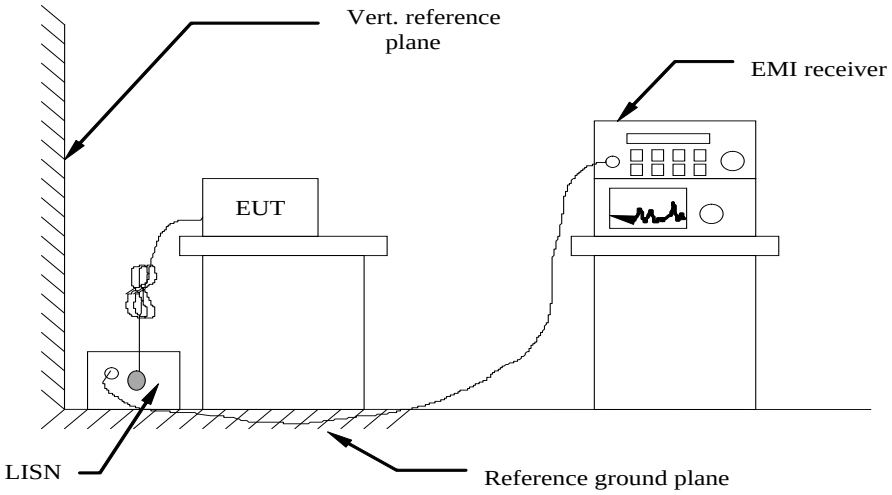
5.7.1 Standard Applicable

According to §15.207 (a): For an intentional radiator which 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 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

* Decreasing linearly with the logarithm of the frequency

5.7.2 Block Diagram of Test Setup



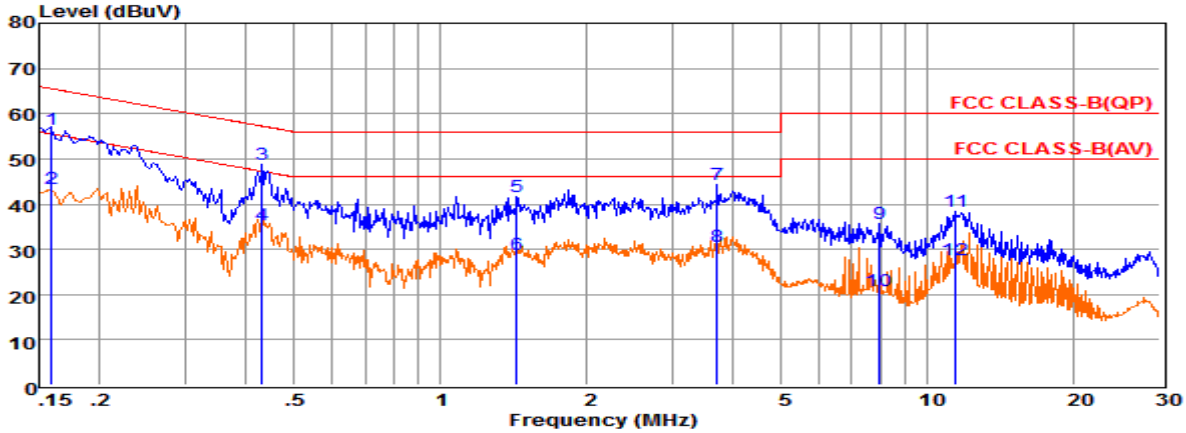
5.7.3 Test Results

PASS.

The test data please refer to following page.

AC Conducted Emission of power by adapter @ AC 120V/60Hz @ UNII Band 3 (worst case)

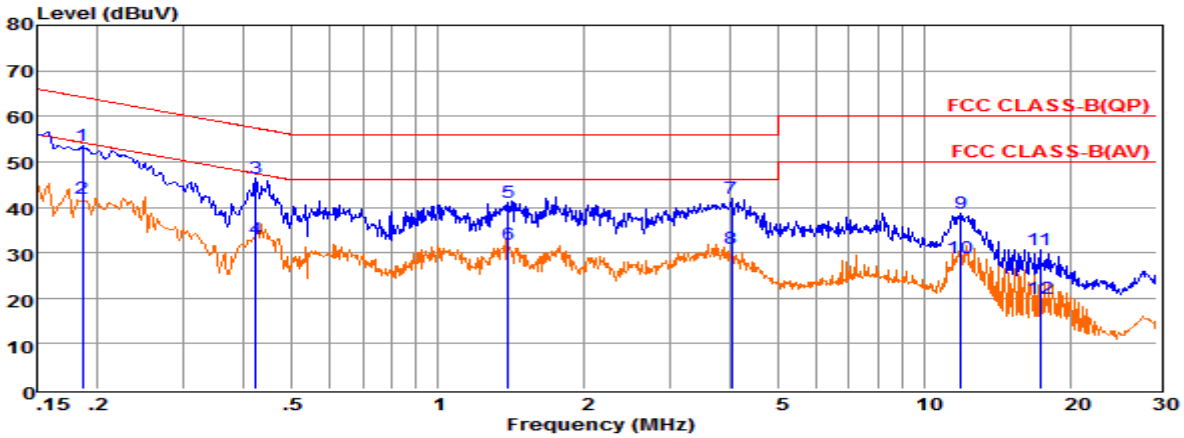
Neutral



	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB
1	0.16	36.87	9.68	0.02	10.00	56.57	65.52	-8.95	QP
2	0.16	23.61	9.68	0.02	10.00	43.31	55.51	-12.20	Average
3	0.43	29.02	9.62	0.04	10.00	48.68	57.24	-8.56	QP
4	0.43	15.85	9.62	0.04	10.00	35.51	47.24	-11.73	Average
5	1.43	21.84	9.63	0.05	10.00	41.52	56.00	-14.48	QP
6	1.43	9.19	9.63	0.05	10.00	28.87	46.00	-17.13	Average
7	3.70	24.64	9.65	0.06	10.00	44.35	56.00	-11.65	QP
8	3.70	10.88	9.65	0.06	10.00	30.59	46.00	-15.41	Average
9	7.98	15.95	9.70	0.07	10.00	35.72	60.00	-24.28	QP
10	7.98	1.13	9.70	0.07	10.00	20.90	50.00	-29.10	Average
11	11.44	18.67	9.73	0.09	10.00	38.49	60.00	-21.51	QP
12	11.44	7.92	9.73	0.09	10.00	27.74	50.00	-22.26	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

Line



	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB
1	0.19	33.75	9.62	0.02	10.00	53.39	64.20	-10.81	QP
2	0.19	22.15	9.62	0.02	10.00	41.79	54.19	-12.40	Average
3	0.42	26.76	9.62	0.04	10.00	46.42	57.42	-11.00	QP
4	0.42	13.37	9.62	0.04	10.00	33.03	47.42	-14.39	Average
5	1.40	21.25	9.63	0.05	10.00	40.93	56.00	-15.07	QP
6	1.40	12.06	9.63	0.05	10.00	31.74	46.00	-14.26	Average
7	4.01	22.32	9.65	0.06	10.00	42.03	56.00	-13.97	QP
8	4.01	11.29	9.65	0.06	10.00	31.00	46.00	-15.00	Average
9	11.87	18.76	9.70	0.09	10.00	38.55	60.00	-21.45	QP
10	11.87	9.08	9.70	0.09	10.00	28.87	50.00	-21.13	Average
11	17.29	10.76	9.73	0.11	10.00	30.60	60.00	-29.40	QP
12	17.29	0.02	9.73	0.11	10.00	19.86	50.00	-30.14	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

****Note: Pre-scan all modes and recorded the worst case results in this report (UNII Band 3).*

5.8 Undesirable Emissions Measurement

5.8.1 Limit

According to ξ15.407 (b) Undesirable emission limits. Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(a) 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 −27 dBm/MHz.

(b) 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.

(c) 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.

(d) 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.

(e) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(f) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(g) The provisions of §15.205 apply to intentional radiators operating under this section.

(h) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

5.8.2 Test Configuration

5.8.3 Test Procedure

According to KDB789033 D02 General UNII Test Procedures New Rules Section G: Unwanted Emission Measurement

1. Unwanted Emissions in the Restricted Bands

a) For all measurements, follow the requirements in section II.G.3. “General Requirements for Unwanted Emissions Measurements.”

b) At frequencies below 1000 MHz, use the procedure described in section II.G.4. “Procedure for Unwanted Emissions Measurements below 1000 MHz.”

c) At frequencies above 1000 MHz, measurements performed using the peak and average measurement procedures described in sections II.G.5. and II.G.6, respectively, must satisfy the respective peak and average limits. If all peak measurements satisfy the average limit, then average measurements are not required.

d) For conducted measurements above 1000 MHz, EIRP shall be computed as specified in section

II.G.3.b) and then field strength shall be computed as follows (see KDB Publication 412172):

i) E[dBμV/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules;

ii) E[dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters

e) For conducted measurements below 1000 MHz, the field strength shall be computed as specified in d), above, and then an additional 4.7 dB shall be added as an upper bound on the field strength that would be observed on a test range with a ground plane for frequencies between 30 MHz and 1000 MHz, or an additional 6 dB shall be added for frequencies below 30 MHz.

2. Unwanted Emissions that fall Outside of the Restricted Bands

a) For all measurements, follow the requirements in section II.G.3. “General Requirements for Unwanted Emissions Measurements.”

b) At frequencies below 1000 MHz, use the procedure described in section II.G.4. “Procedure for Unwanted Emissions Measurements below 1000 MHz.”

c) At frequencies above 1000 MHz, use the procedure for maximum emissions described in section II.G.5., “Procedure for Unwanted Maximum Unwanted Emissions Measurements Above 1000 MHz.”

d) Section 15.407(b) (1-3) specifies the unwanted emissions limit for the U-NII-1 and 2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz. However, an out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz dBm/MHz peak emission limit.

i) Section 15.407(b) (4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b) (4) (i). An alternative to the band emissions mask is specified in Section 15.407(b) (4) (ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the alternative limit.

e) If radiated measurements are performed, field strength is then converted to EIRP as follows:

i) EIRP = ((E×d) ^2) / 30

Where:

- E is the field strength in V/m;
- d is the measurement distance in meters;
- EIRP is the equivalent isotopically radiated power in watts;

ii) Working in dB units, the above equation is equivalent to:

EIRP [dBm] = E [dBμV/m] + 20 log (d [meters]) - 104.77

iii) Or, if d is 3 meters:

EIRP [dBm] = E [dBμV/m] - 95.23

3) Radiated versus Conducted Measurements.

The unwanted emission limits in both the restricted and non-restricted bands are based on radiated measurements; however, as an alternative, antenna-port conducted measurements in conjunction with cabinet emissions tests will be permitted to demonstrate compliance provided that the following steps are performed:

(i) Cabinet emissions measurements. A radiated test shall be performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna may be replaced by a termination matching the nominal impedance of the antenna.

(ii) Impedance matching. Conducted tests shall be performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT.

(iii) EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater.3 However, for devices that operate in multiple bands using the same transmit antenna, the highest gain of the antenna within the operating band nearest to the out-of-band frequency being measured may be used in lieu of the overall highest gain when measuring emissions at frequencies within 20% of the absolute frequency at the nearest edge of that band, but in no case shall a value less than 2 dBi be selected.

(iv) EIRP adjustments for multiple outputs. For devices with multiple outputs occupying the same or overlapping frequency ranges in the same band (e.g., MIMO or beamforming devices), compute the total EIRP as follows:

- Compute EIRP for each output, as described in (iii), above.
- Follow the procedures specified in KDB Publication 662911 for summing emissions across the outputs or adjusting emission levels measured on individual outputs by 10 log (N_{ANT}), where N_{ANT} is the number of outputs.

- Add the array gain term specified in KDB Publication 662911 for out-of-band and spurious signals.
  (v) Direction of maximum emission.
  For all radiated emissions tests, measurements shall correspond to the direction of maximum emission level for each measured emission (see ANSI C63.10 for guidance).

5.5.9.4 Test Results

IEEE 802.11a										
Frequency (MHz)	Conducted Power (dBm)			Antenna Gain(dBi)	EIRP (converted) (dBm/1MHz)			Detector	Limit (dBm/1MHz)	Verdict
	Ant 0	Ant 1	Sum		Ant 0	Ant 1	Sum			
5650.00	-50.060	-49.326	/	5.000	-45.060	-44.326	/	Peak	-27.000	PASS
5700.00	-47.863	-46.952	/	5.000	-42.863	-41.952	/	Peak	10.000	PASS
5720.00	-37.940	-38.922	/	5.000	-32.940	-33.922	/	Peak	15.600	PASS
5725.00	-30.006	-29.265	/	5.000	-25.006	-24.265	/	Peak	27.000	PASS
5850.00	-32.841	-34.264	/	5.000	-27.841	-29.264	/	Peak	27.000	PASS
5855.00	-35.699	-38.555	/	5.000	-30.699	-33.555	/	Peak	15.600	PASS
5875.00	-45.853	-46.674	/	5.000	-40.853	-41.674	/	Peak	10.000	PASS
5925.00	-49.009	-49.486	/	5.000	-44.009	-44.486	/	Peak	-27.000	PASS

IEEE 802.11n HT20											
Frequency (MHz)	Conducted Power (dBm)			Antenna Gain (dBi)	Directional Gain (dBi)	EIRP (converted) (dBm/1MHz)			Detector	Limit (dBm/1MHz)	Verdict
	Ant 0	Ant 1	Sum			Ant 0	Ant 1	Sum			
5650.00	-49.435	-49.828	-46.617	5.000	8.010	-44.435	-44.828	-38.607	Peak	-27.000	PASS
5700.00	-47.854	-48.120	-44.975	5.000	8.010	-42.854	-43.120	-36.965	Peak	10.000	PASS
5720.00	-37.406	-37.909	-34.640	5.000	8.010	-32.406	-32.909	-26.630	Peak	15.600	PASS
5725.00	-27.086	-28.194	-24.594	5.000	8.010	-22.086	-23.194	-16.584	Peak	27.000	PASS
5850.00	-33.192	-35.163	-31.056	5.000	8.010	-28.192	-30.163	-23.046	Peak	27.000	PASS
5855.00	-35.964	-39.096	-34.243	5.000	8.010	-30.964	-34.096	-26.233	Peak	15.600	PASS
5875.00	-44.047	-46.487	-42.088	5.000	8.010	-39.047	-41.487	-34.078	Peak	10.000	PASS
5925.00	-49.188	-48.907	-46.035	5.000	8.010	-44.188	-43.907	-38.025	Peak	-27.000	PASS

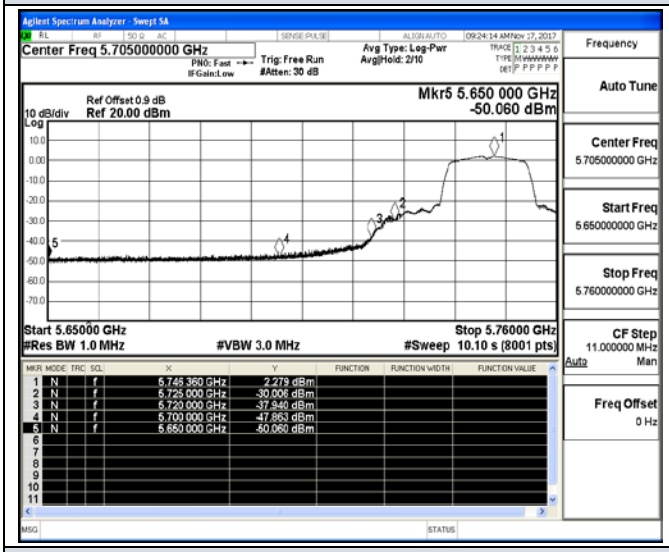
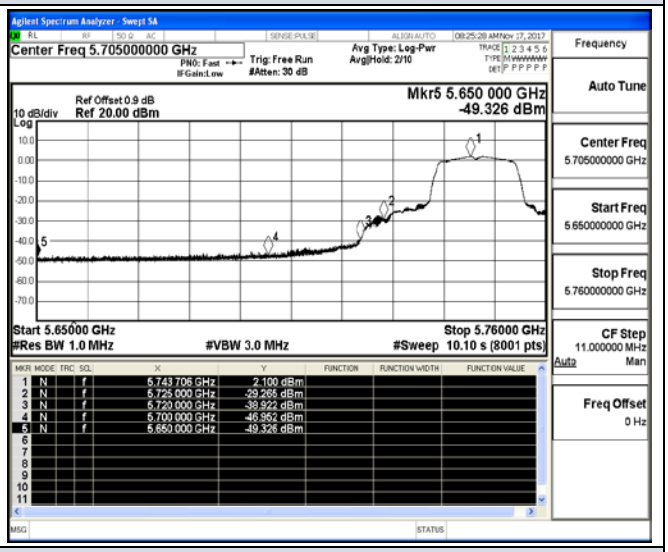
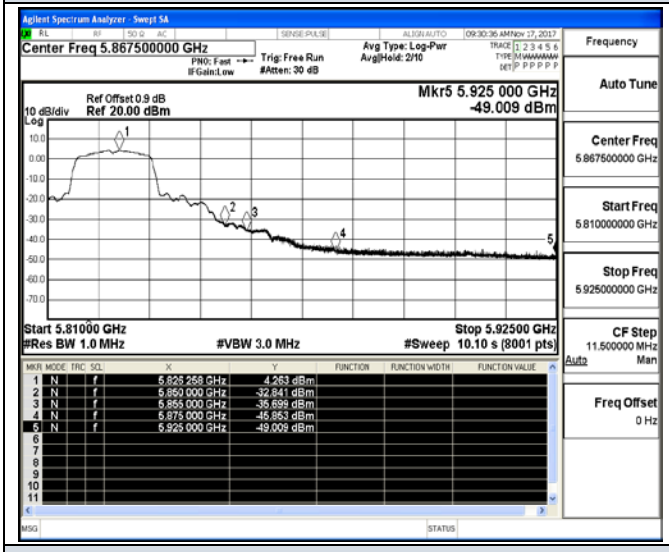
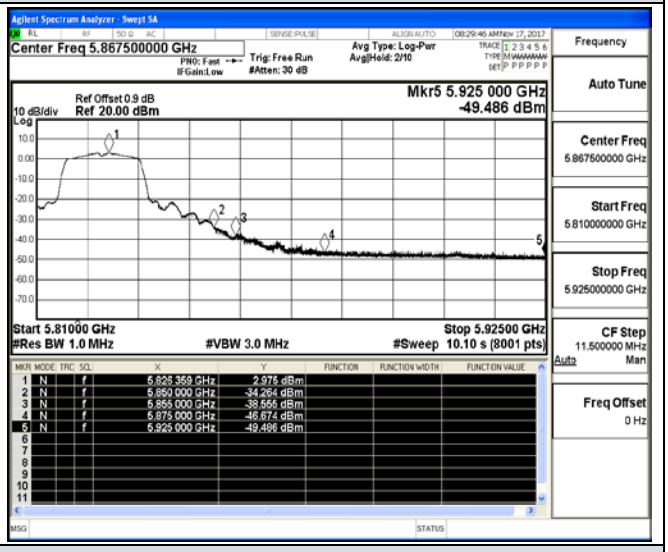
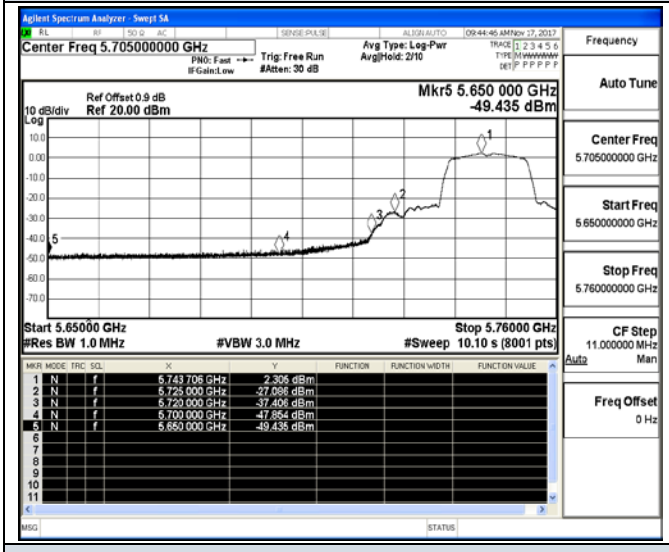
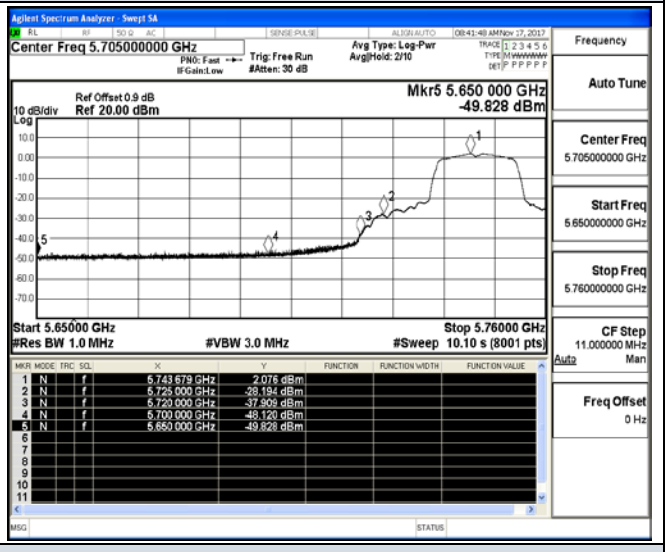
IEEE 802.11n HT40											
Frequency (MHz)	Conducted Power (dBm)			Antenna Gain (dBi)	Directional Gain(dBi)	EIRP (converted) (dBm/1MHz)			Detector	Limit (dBm/1MHz)	Verdict
	Ant 0	Ant 1	Sum			Ant 0	Ant 1	Sum			
5650.00	-48.863	-49.967	-46.370	5.000	8.010	-43.863	-44.967	-38.360	Peak	-27.00	PASS
5700.00	-43.739	-44.062	-40.887	5.000	8.010	-38.739	-39.062	-32.877	Peak	10.00	PASS
5720.00	-30.426	-31.225	-27.797	5.000	8.010	-25.426	-26.225	-19.787	Peak	15.60	PASS
5725.00	-27.497	-28.709	-25.051	5.000	8.010	-22.497	-23.709	-17.041	Peak	27.00	PASS
5850.00	-36.672	-38.393	-34.438	5.000	8.010	-31.672	-33.393	-26.428	Peak	27.00	PASS
5855.00	-37.424	-41.754	-36.060	5.000	8.010	-32.424	-36.754	-28.050	Peak	15.60	PASS
5875.00	-44.739	-45.203	-41.955	5.000	8.010	-39.739	-40.203	-33.945	Peak	10.00	PASS
5925.00	-49.921	-50.260	-47.077	5.000	8.010	-44.921	-45.260	-39.067	Peak	-27.00	PASS

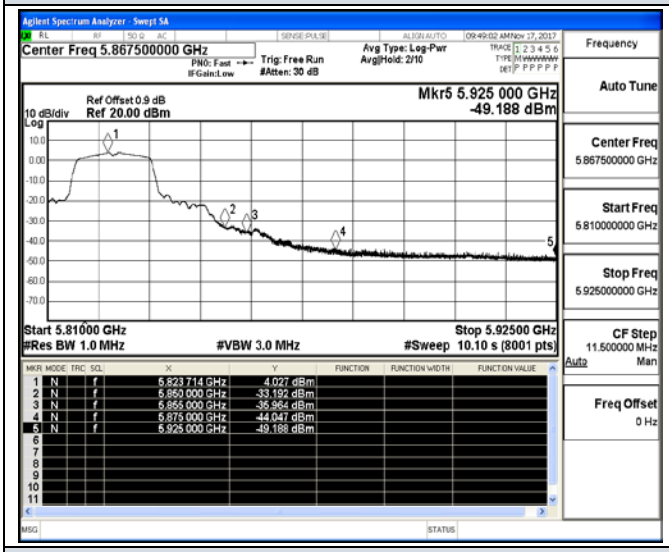
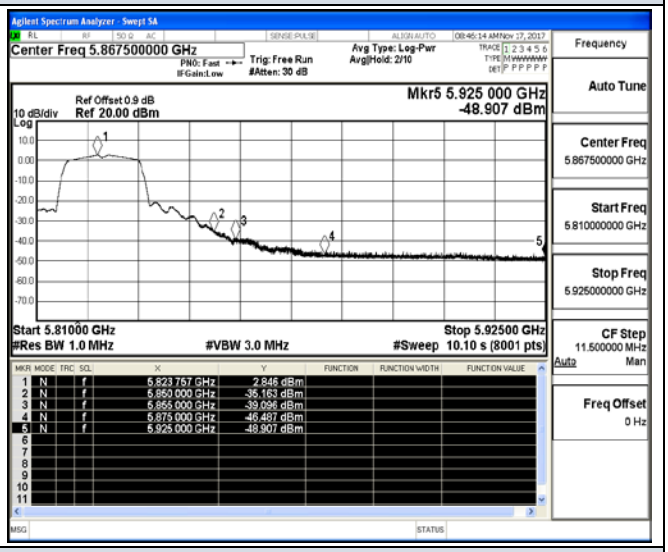
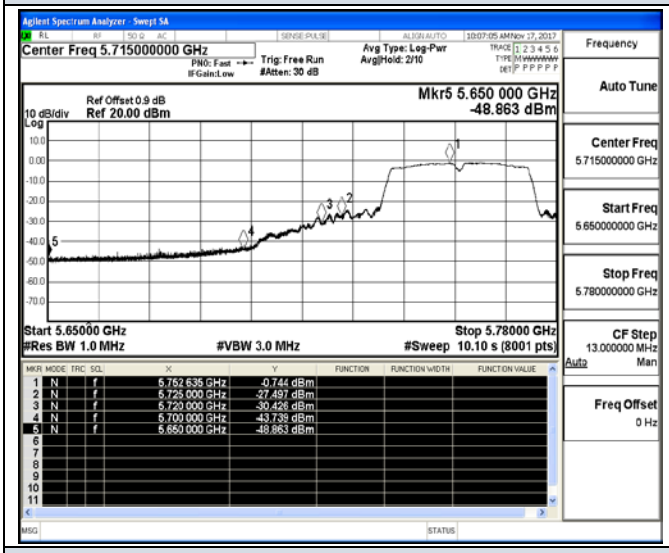
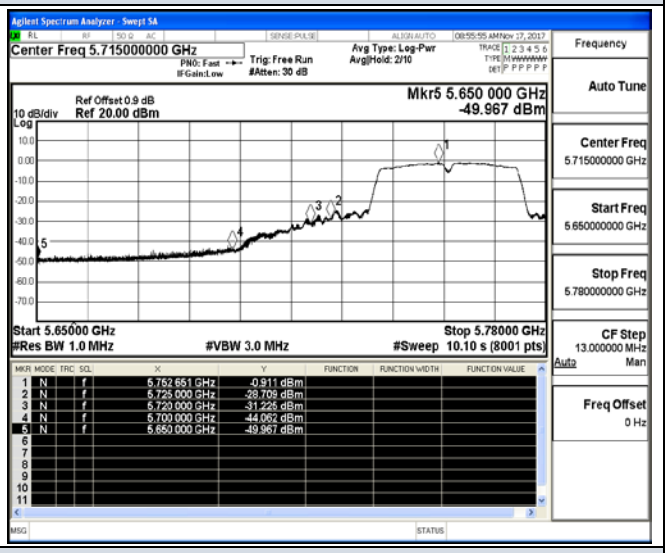
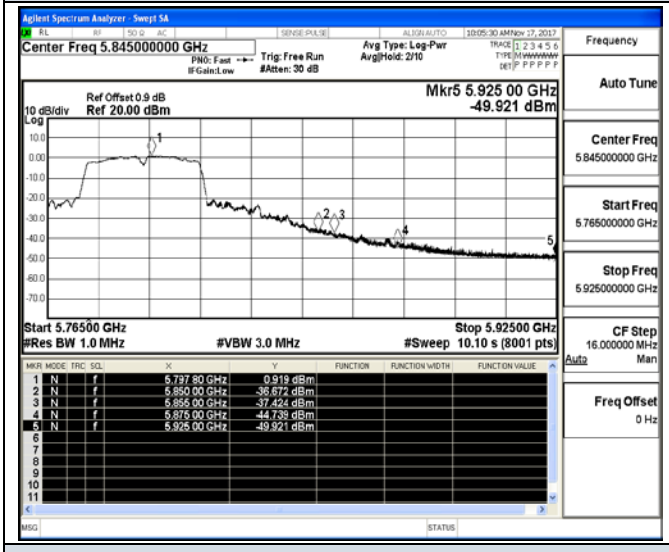
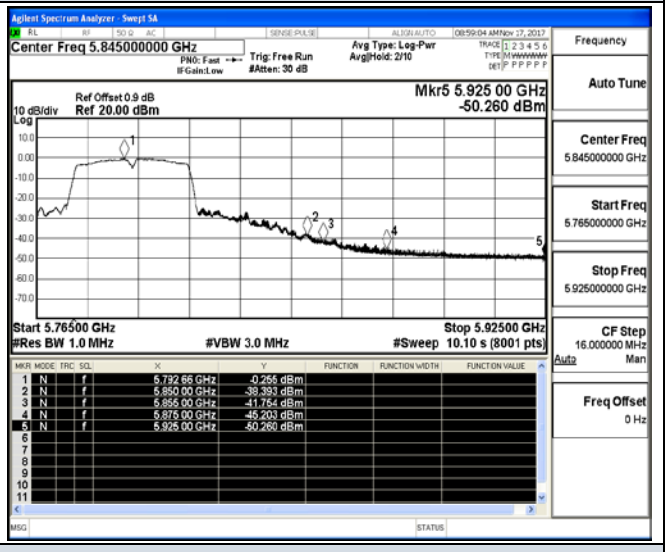
Remark:

1. *Measured unwanted emission at difference data rate for each mode and recorded worst case for each mode.*
2. *Test results including cable loss;*
3. *Worst case data at MCS0 at IEEE 802.11a; MCS0 at IEEE 802.11n HT20, IEEE 802.11n HT40;*
4. *E.I.R.P = Conducted power + Directional Gain*
5. *EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to*

convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater. However, for devices that operate in multiple bands using the same transmit antenna, the highest gain of the antenna within the operating band nearest to the out-of-band frequency being measured may be used in lieu of the overall highest gain when measuring emissions at frequencies within 20% of the absolute frequency at the nearest edge of that band, but in no case shall a value less than 2 dBi be selected.

6. *Over limit = EIRP - Limit*
7. *Please refer to following test plots;*

Unwanted emission	
IEEE 802.11a	IEEE 802.11a
Antenna 0	Antenna 1
	
Channel 149 / 5745 MHz – Peak	Channel 149 / 5745 MHz – Peak
	
Channel 165 / 5825 MHz – Peak	Channel 165 / 5825 MHz – Peak
IEEE 802.11n HT20	IEEE 802.11n HT20
	
Channel 149 / 5745 MHz – Peak	Channel 149 / 5745 MHz – Peak

Unwanted emission	
IEEE 802.11n HT20	IEEE 802.11n HT20
Antenna 0	Antenna 1
	
Channel 165 / 5825 MHz – Peak	Channel 165 / 5825 MHz – Peak
IEEE 802.11n HT40	IEEE 802.11n HT40
	
Channel 151 / 5755 MHz – Peak	Channel 151 / 5755 MHz – Peak
	
Channel 159 / 5795 MHz – Peak	Channel 159 / 5795 MHz – Peak

5.9. Antenna Requirements

5.9.1 Standard Applicable

According to antenna requirement of §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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited

And according to FCC 47 CFR Section 15.407 (a), 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.

According to RSS-Gen,

The applicant for equipment certification, as per RSP-100, must provide a list of all antenna types that may be used with the licence-exempt transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna.

Licence-exempt transmitters that have received equipment certification may operate with different types of antennas. However, it is not permissible to exceed the maximum equivalent isotropically radiated power (e.i.r.p.) limits specified in the applicable standard (RSS) for the licence-exempt apparatus.

Testing shall be performed using the highest gain antenna of each combination of licence-exempt transmitter and antenna type, with the transmitter output power set at the maximum level.9 When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna manufacturer.

5.9.2 Antenna Connected Construction

5.9.2.1. Standard Applicable

According to § 15.203 & RSS-Gen, 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.

5.9.2.2. Antenna Connector Construction

The directional gains of antenna used for transmitting is 5.00 dBi, and the antenna is an External Antenna connect to the R-SMA antenna connect port and no consideration of replacement in order to meet §15.203 and RSS-Gen antenna requirement. Please see EUT photo for details.

5.9.2.3. Results: Compliance.

Measurement

The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module.
Conducted power refers ANSI C63.10:2013 Output power test procedure for NII devices.
Radiated power refers to ANSI C63.10:2013 Radiated emissions tests.

Measurement parameters

Measurement parameter	
Detector:	Peak
Sweep Time:	Auto
Resolution bandwidth:	1MHz
Video bandwidth:	3MHz
Trace-Mode:	Max hold

Limits

FCC	ISED
Antenna Gain	
6 dBi	

Note: The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module. Conducted power and Radiated E.I.R.P measurement procedures refer to RSS-247 Annex A. For WLAN devices, the OFDM mode is used;

Antenna 0

T_{nom}	V_{nom}	Lowest Channel 5745 MHz	Middle Channel 5785 MHz	Highest Channel 5825 MHz
Conducted power [dBm] Measured with 802.11a modulation		3.779	4.012	4.263
Radiated power [dBm] Measured with 802.11a modulation		7.951	8.881	8.801
Gain [dBi] Calculated		4.172	4.869	4.538
Measurement uncertainty			± 1.6 dB (cond.) / ± 3.8 dB (rad.)	

Antenna 1

T_{nom}	V_{nom}	Lowest Channel 5745 MHz	Middle Channel 5785 MHz	Highest Channel 5825 MHz
Conducted power [dBm] Measured with 802.11a modulation		2.255	2.681	2.972
Radiated power [dBm] Measured with 802.11a modulation		6.321	7.588	7.445
Gain [dBi] Calculated		4.066	4.907	4.473
Measurement uncertainty			± 1.6 dB (cond.) / ± 3.8 dB (rad.)	

7. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separated files for Test Setup Photos of the EUT.

8. EXTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

9. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

----------THE END OF REPORT----------