FCC RF Test Report

APPLICANT	:	Lenovo(Shanghai) Electronics Technology Co., Ltd.
EQUIPMENT	:	Portable Tablet Computer
BRAND NAME	:	Lenovo
MODEL NAME	:	TB-X704A
FCC ID	:	O57TBX704A
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Mar. 13, 2017 and testing was completed on May 15, 2017. We, Sporton International (KunShan) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (KunShan) INC., the test report shall not be reproduced except in full.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR731307D	Rev. 01	Initial issue of report	Jun. 02, 2017

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	FCC ≤ 24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	FCC ≤ 11 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) 15.209(a)	Pass	Under limit 4.29 dB at 43.580 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 8.14 dB at 0.604 MHz
3.6	15.407(g)	Frequency Stability	Within Operation Band	Pass	-
3.7	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Lenovo(Shanghai) Electronics Technology Co., Ltd.
NO.68 BUILDING, 199 FENJU RD, China (Shanghai) Pilot Free Trade Zone, 200131, CHINA

1.2 Manufacturer

Lenovo PC HK Limited
23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay, Hong Kong

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Portable Tablet Computer
Brand Name	Lenovo
Model Name	TB-X704A
FCC ID	O57TBX704A
EUT supports Radios application	WCDMA/HSPA/DC-HSDPA/ HSPA+ (16QAM uplink is not supported)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR/ Bluetooth v4.0 LE/ Bluetooth v4.1 LE/ Bluetooth v4.2 LE
IMEI Code	Conducted: 865301030001065 Conduction: Sample 1: 865301030001172 Sample 2: 865301030005694 Radiation: Sample 1: 865301030002188 Sample 2: 865301030005033
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 14.20 dBm / 0.0263 W 802.11n HT20 : 14.18 dBm / 0.0262 W 802.11n HT40 : 14.17 dBm / 0.0261 W 802.11ac VHT20 : 13.34 dBm / 0.0216 W 802.11ac VHT40 : 13.19 dBm / 0.0208 W 802.11ac VHT80 : 12.15 dBm / 0.0164 W **<5260 MHz ~ 5320 MHz>** 802.11a : 14.09 dBm / 0.0256 W 802.11n HT20 : 13.96 dBm / 0.0249 W 802.11n HT40 : 13.95 dBm / 0.0248 W 802.11ac VHT20 : 13.16 dBm / 0.0207 W 802.11ac VHT40 : 13.12 dBm / 0.0205 W 802.11ac VHT80 : 12.06 dBm / 0.0161 W **<5500 MHz ~ 5700 MHz >** 802.11a : 13.75 dBm / 0.0237 W 802.11n HT20 : 14.07 dBm / 0.0255 W 802.11n HT40 : 14.14 dBm / 0.0259 W 802.11ac VHT20 : 13.10 dBm / 0.0204 W 802.11ac VHT40 : 13.22 dBm / 0.0210 W 802.11ac VHT80 : 12.08 dBm / 0.0161 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 18.68 MHz 802.11n HT20 : 19.28 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT80 : 74.81 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 18.63 MHz 802.11n HT20 : 19.33 MHz 802.11n HT40 : 36.76 MHz 802.11ac VHT80 : 74.69 MHz **<5500 MHz ~ 5700 MHz >** 802.11a : 18.63 MHz 802.11n HT20 : 19.33 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT80 : 74.81 MHz
Antenna Type / Gain	**<5180 MHz ~ 5240 MHz >** PIFA Antenna with gain 0.38 dBi **<5260 MHz ~ 5320 MHz >** PIFA Antenna with gain 0.22 dBi **<5500 MHz ~ 5700 MHz >** PIFA Antenna with gain 0.37 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note:

1. WLAN operation in 5600 MHz ~ 5650 MHz is notched.
2. For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing have assessed only 802.11n HT20/ HT40 by referring to their maximum conducted power.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Component List

There are two types of EUT, the detailed differences between them are shown in the table. According to the differences, we choose sample 1 to perform full test and sample 2 to verify worst case.

Component	Sample 1		Sample 2	
	spec	supplier	spec	supplier
CPU	MSM8953	Qualcomm	MSM8953	Qualcomm
Flash	MCP_32GB-eMMC_16Gb-LPDDR3	Samsung	MCP_32GB-eMMC_16Gb-LPDDR3	Hynix
LCD+TP	A6090A_OCA_4.8 mm_G+F+F_NEG_COF_10.1_1200*1920_IPS_400_GT9110P_INX_INX_OFLIM_ZIF+ZIF	O-film	A6090A_OCA_4.7 mm_GFF_NEG_COF_10.1_1200*1920_IPS_350_GT9110P_BOE_BOE_GIS_ZIF+ZIF	GIS
Front Camera	Camera_6.5*6.5*3.9_OV5695_5M_FF	Q Technology Limited	Camera_6.5*6.5*3.9_500W_OV5695_FF	AVC
Rear Camera	camera_8.62*8.56*5.06_IMX219_8MP_AF_	Q Technology Limited	Camera_8.5*8.5*5.0mm-800W-OV8856-AF-BB	O-film
Battery	7000 mAh_4.4V_ATL268494	SCUD(FUJIAN)	7000 mAh_4.4V_CA278494G_A6090	Celxpert

1.7 Testing Location

Test Site	Sporton International (KunShan) INC.			
Test Site Location	No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
Test Site No.	**Sporton Site No.**			**FCC Registration No.**
	TH01-KS	CO01-KS	03CH03-KS	306251

Note: The test site complies with ANSI C63.4 2014 requirement.

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04
- FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5180-5240 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210	-	-

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5260-5320 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5720 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

2.2 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0

AC Conducted Emission	Mode 1 : WCDMA Band V Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 1(Charging from Adapter 1) + Earphone for sample 1 Mode 2 : WCDMA Band V Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 2(Charging from Adapter 2) + Earphone for sample 2

Remark:

1. The worst case of conducted emission is mode 2; only the test data of it was reported.

2. For Radiated TCs, the tests were performed with Adapter, Earphone, and USB Cable.

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

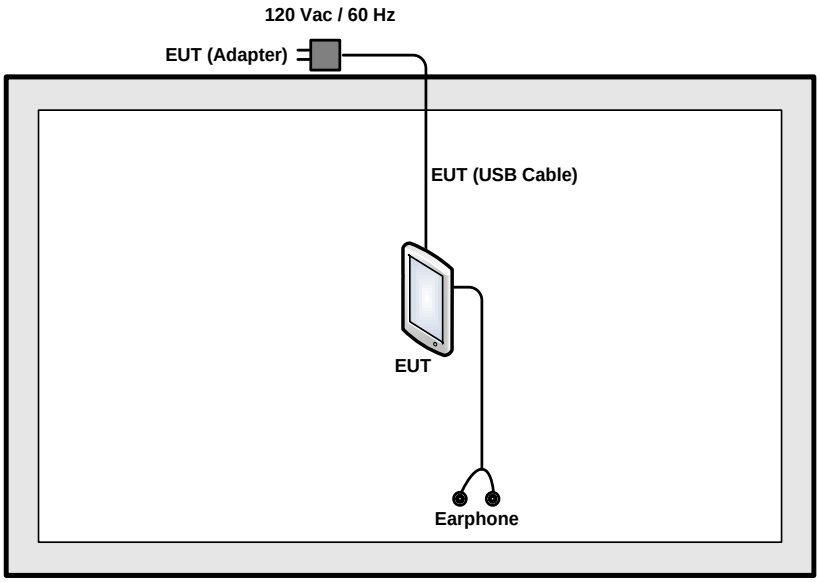
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

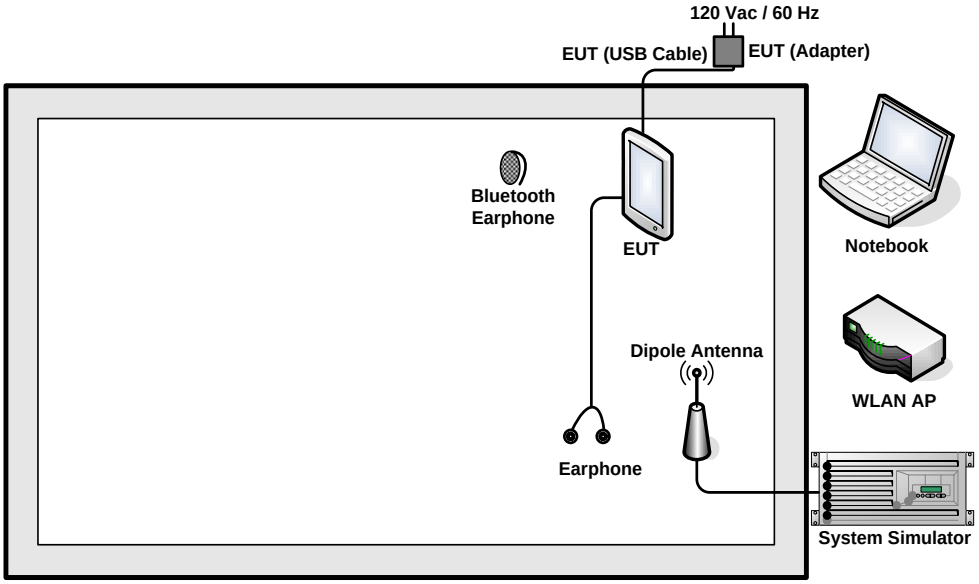
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
3.	WLAN AP	Cisco	Air-AP1262N-A-K9	LDK102073	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
5.	Notebook	Lenovo	Edge E335	PPD-AR5B95	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
6.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
7.	Earphone	Lenovo	LH102	N/A	N/A	Unshielded,1.2m

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the Notebook under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:
The spectrum analyzer offset is derived from RF cable loss.
Offset = RF cable loss.
Following shows an offset computation example with cable loss 6.8 dB.

Offset (dB) = RF cable loss(dB).
= 6.8 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

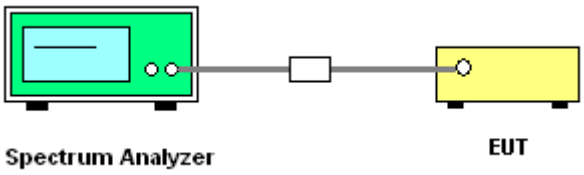
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

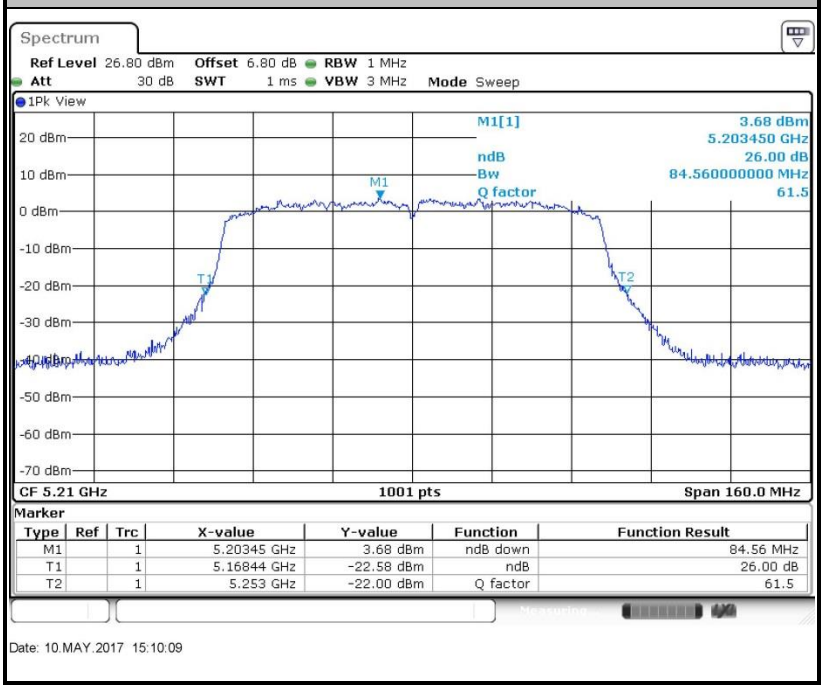
3.1.4 Test Setup



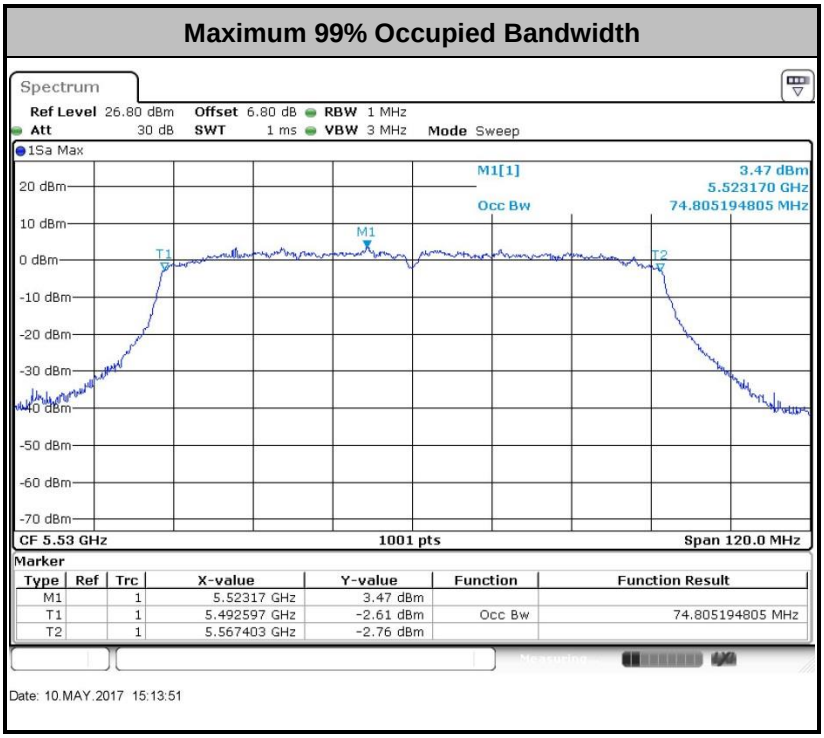
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth Plots

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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.

For the 5.25–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

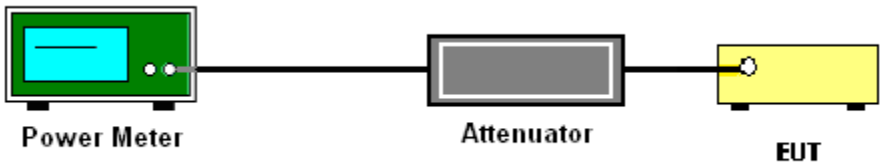
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

3.2.4 Test Setup

For normal channel:



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

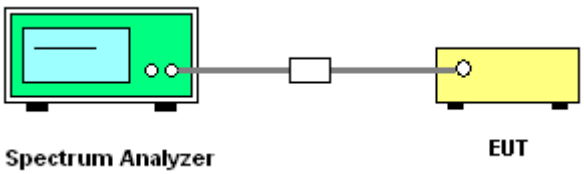
The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section F) Maximum power spectral density.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = RMS
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

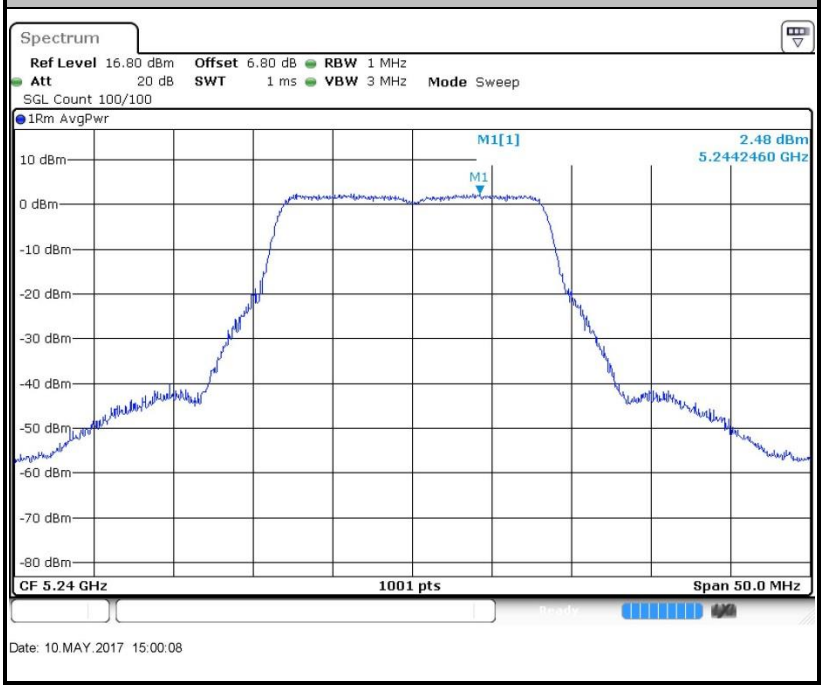
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Spectral Density(dBm/MHz)



Note: Average Power Density (dB) = Measured value+ Duty Factor

3.4 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5725MHz band: all emissions outside of the 5470-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table

Frequency (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

Note: The following formula is used to convert the EIRP to field strength.

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-17	78.3
- 27	68.3

(3) KDB789033 D01 v01r04 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

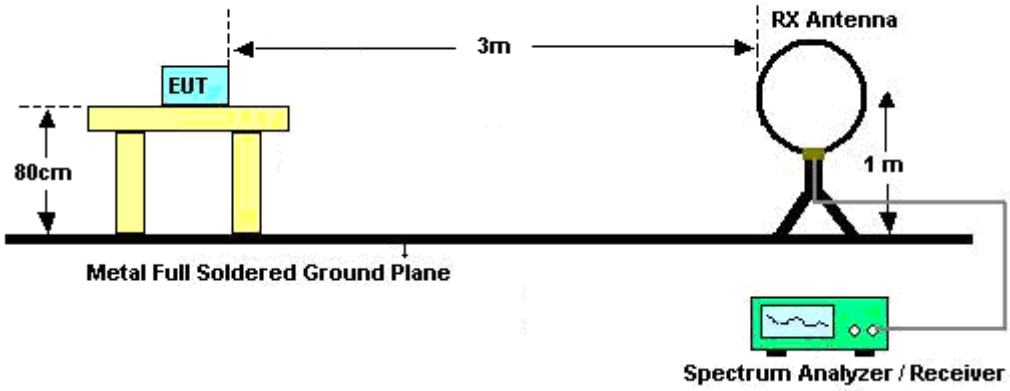
   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

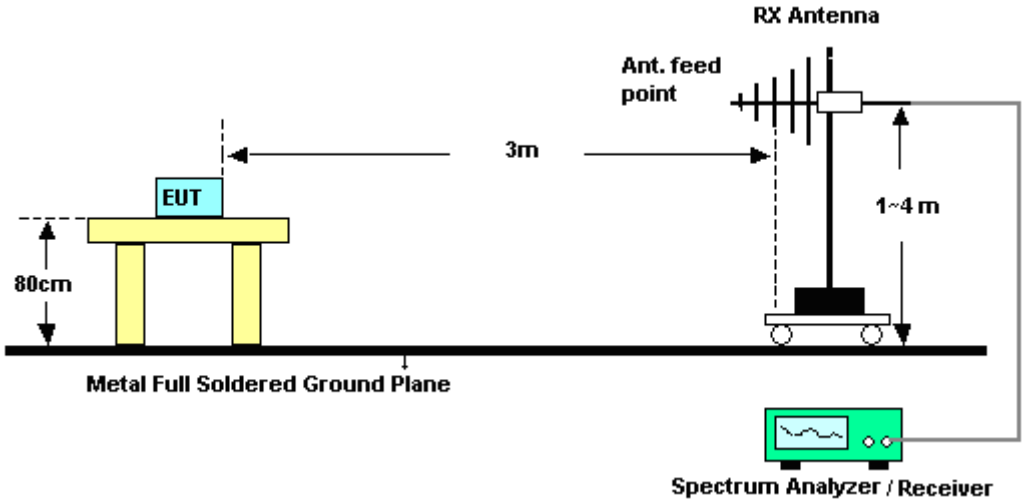
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

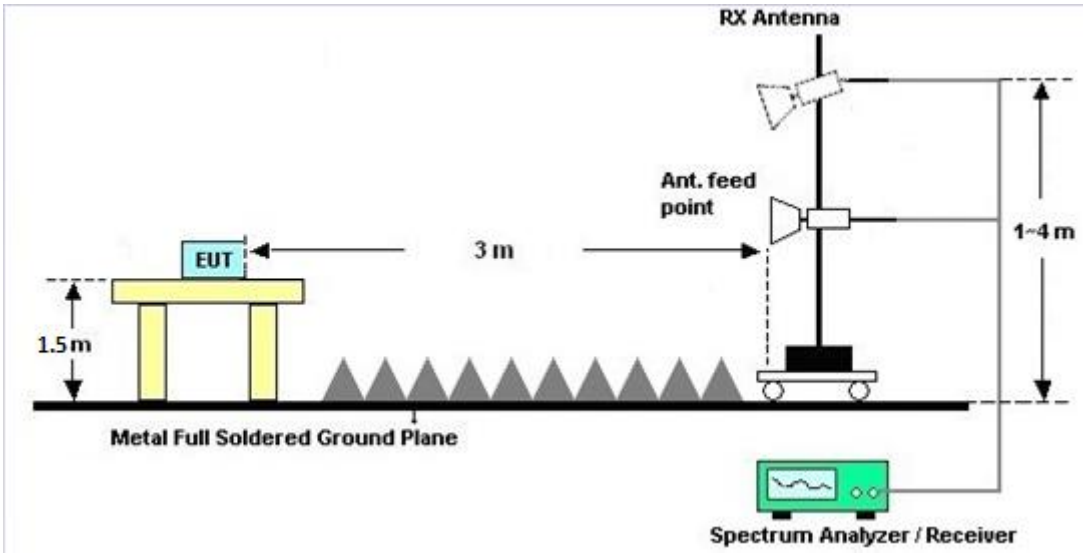
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.4.7 Duty Cycle

Please refer to Appendix C.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix B.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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 of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

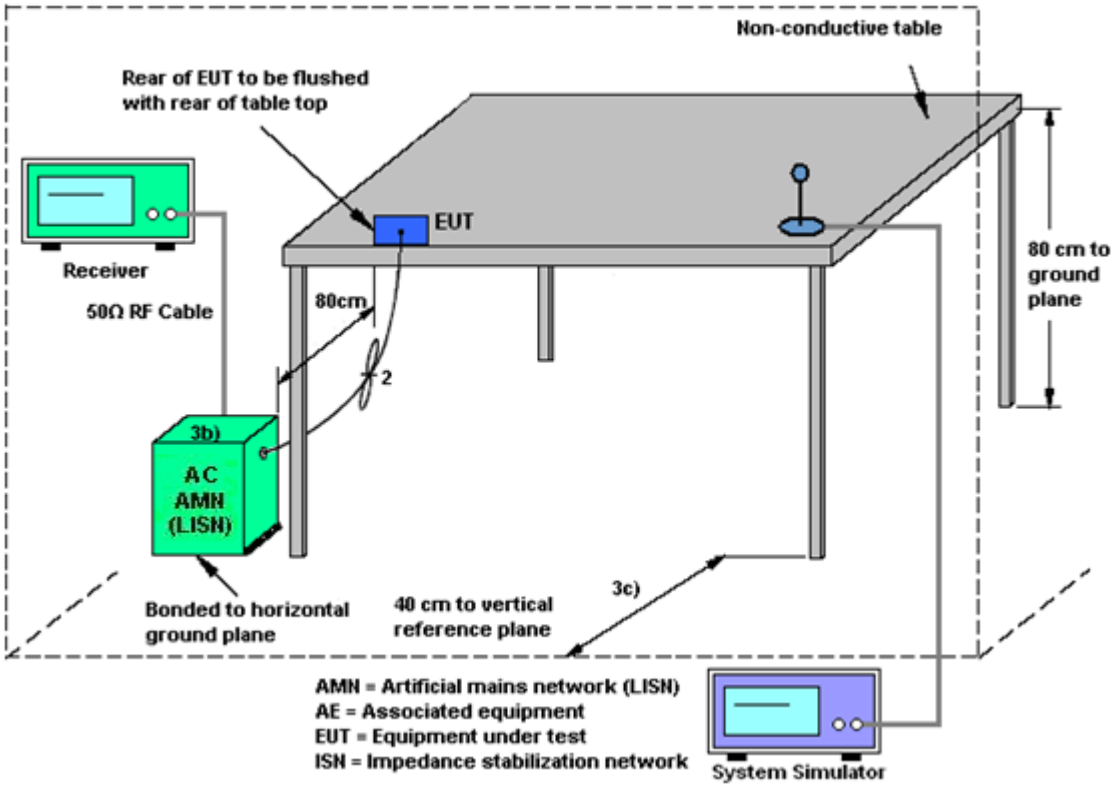
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

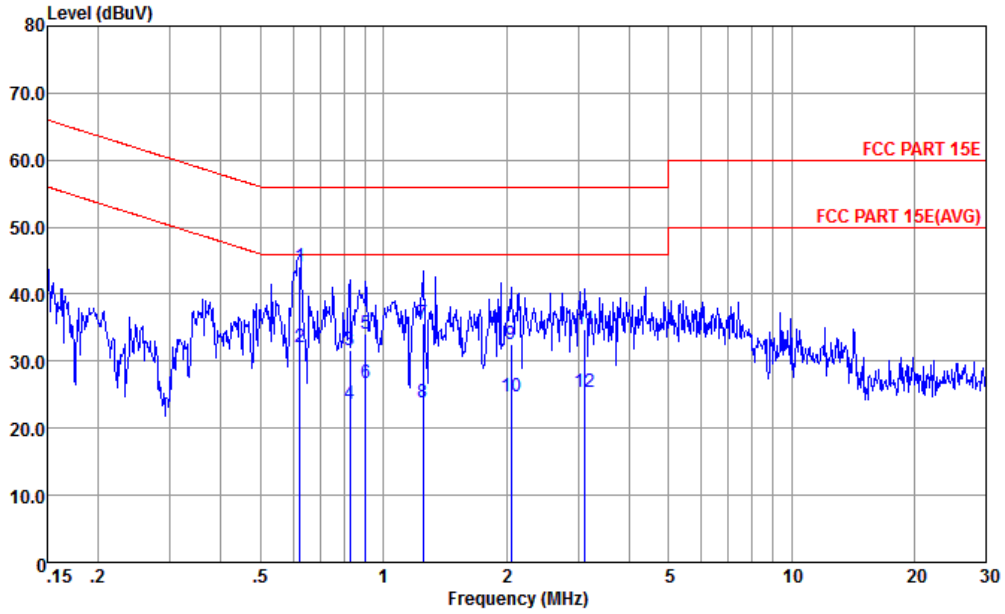
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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 with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	**Temperature :**	22~24℃
Test Engineer :	Amos Zhang	**Relative Humidity :**	42~46%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band V Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 2(Charging from Adapter 2) + Earphone for sample 2		

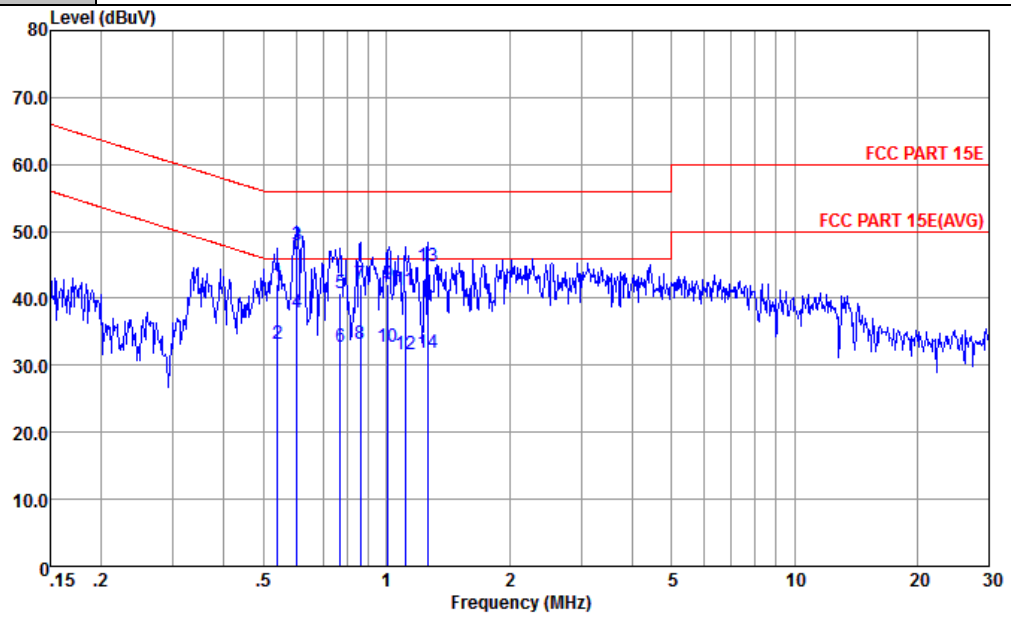


Site : CO01-KS
Condition : FCC PART 15E LISN-L-161017-060103 LINE

mode : Mode 2
: 865301030005694 #44

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.624	44.04	-11.96	56.00	33.60	0.26	10.18	QP
2	0.624	32.04	-13.96	46.00	21.60	0.26	10.18	Average
3	0.826	31.73	-24.27	56.00	21.30	0.25	10.18	QP
4	0.826	23.63	-22.37	46.00	13.20	0.25	10.18	Average
5	0.904	34.04	-21.96	56.00	23.60	0.26	10.18	QP
6	0.904	26.64	-19.36	46.00	16.20	0.26	10.18	Average
7	1.249	35.63	-20.37	56.00	25.20	0.24	10.19	QP
8	1.249	23.73	-22.27	46.00	13.30	0.24	10.19	Average
9	2.055	32.60	-23.40	56.00	22.20	0.21	10.19	QP
10	2.055	24.70	-21.30	46.00	14.30	0.21	10.19	Average
11	3.123	34.73	-21.27	56.00	24.30	0.21	10.22	QP
12	3.123	25.33	-20.67	46.00	14.90	0.21	10.22	Average

Test Mode :	Mode 2	**Temperature :**	22~24℃
Test Engineer :	Amos Zhang	**Relative Humidity :**	42~46%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	WCDMA Band V Idle + Bluetooth Link + WLAN Link (5G) + USB Cable 2(Charging from Adapter 2) + Earphone for sample 2		



Site : CO01-KS
Condition : FCC PART 15E LISN-N-161017-060103 NEUTRAL

mode : Mode 2
: 865301030005694 #44

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.541	42.17	-13.83	56.00	31.60	0.38	10.19	QP
2		0.541	33.17	-12.83	46.00	22.60	0.38	10.19	Average
3	*	0.604	47.86	-8.14	56.00	37.30	0.38	10.18	QP
4		0.604	37.86	-8.14	46.00	27.30	0.38	10.18	Average
5		0.771	40.86	-15.14	56.00	30.30	0.39	10.17	QP
6		0.771	32.66	-13.34	46.00	22.10	0.39	10.17	Average
7		0.862	42.17	-13.83	56.00	31.60	0.39	10.18	QP
8		0.862	33.17	-12.83	46.00	22.60	0.39	10.18	Average
9		1.010	42.19	-13.81	56.00	31.60	0.40	10.19	QP
10		1.010	32.79	-13.21	46.00	22.20	0.40	10.19	Average
11		1.111	41.19	-14.81	56.00	30.60	0.40	10.19	QP
12		1.111	31.69	-14.31	46.00	21.10	0.40	10.19	Average
13		1.262	44.89	-11.11	56.00	34.30	0.40	10.19	QP
14		1.262	31.89	-14.11	46.00	21.30	0.40	10.19	Average

3.6 Frequency Stability Measurement

3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

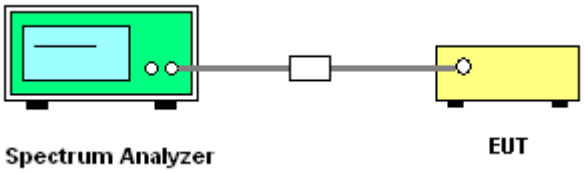
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

3.7 Automatically Discontinue Transmission

3.7.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.8 Antenna Requirements

3.8.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 09, 2016	May 10, 2017	Aug. 08, 2017	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 19, 2017	May 10, 2017	Jan. 18, 2018	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 19, 2017	May 10, 2017	Jan. 18, 2018	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 13, 2016	May 10, 2017	Oct. 12, 2017	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 22. 2016	May 15, 2017	Oct. 21. 2017	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Apr. 18, 2017	May 15, 2017	Apr.17, 2018	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 23, 2016	May 15, 2017	Nov.22, 2017	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Apr. 22, 2017	May 15, 2017	Apr. 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Apr. 22, 2017	May 15, 2017	Apr 21, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18GHz ~40GHz	Oct. 19, 2016	May 15, 2017	Oct. 18, 2017	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr 18, 2017	May 15, 2017	Apr 17, 2018	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Oct. 13, 2016	May 15, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Apr. 18. 2017	May 15, 2017	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 13, 2016	May 15, 2017	Oct. 12, 2017	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 15, 2017	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 15, 2017	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 15, 2017	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 20, 2017	May 02, 2017	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2016	May 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2016	May 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 13, 2016	May 02, 2017	Oct. 12, 2017	Conduction (CO01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.3dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.6dB

Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.5dB

Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.7dB

Appendix A. Conducted Test Results

Report Number : FR731307D

Test Engineer:	Silent Hai	Temperature:	21~25	°C
Test Date:	2017/5/10	Relative Humidity:	51~55	%

Report Number : FR731307D

TEST RESULTS DATA
26dB and 99% OBW

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	18.68	23.58	-	22.71		
11a	6Mbps	1	44	5220	18.63	23.48	-	22.70		
11a	6Mbps	1	48	5240	18.53	23.73	-	22.68		
HT20	MCS0	1	36	5180	19.18	23.98	-	22.83		
HT20	MCS0	1	44	5220	19.28	23.83	-	22.85		
HT20	MCS0	1	48	5240	19.28	23.73	-	22.85		
HT40	MCS0	1	38	5190	36.66	44.69	-	23.01		
HT40	MCS0	1	46	5230	36.66	44.60	-	23.01		
VHT80	MCS0	1	42	5210	74.81	84.56	-	23.01		

Report Number : FR731307D

TEST RESULTS DATA
Average Power Table

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	0.58	14.20	24.00	0.38		Pass
11a	6Mbps	1	44	5220	0.58	13.87	24.00	0.38		Pass
11a	6Mbps	1	48	5240	0.58	13.94	24.00	0.38		Pass
HT20	MCS0	1	36	5180	0.65	14.18	24.00	0.38		Pass
HT20	MCS0	1	44	5220	0.65	13.78	24.00	0.38		Pass
HT20	MCS0	1	48	5240	0.65	14.12	24.00	0.38		Pass
HT40	MCS0	1	38	5190	0.63	14.17	24.00	0.38		Pass
HT40	MCS0	1	46	5230	0.63	14.05	24.00	0.38		Pass
VHT80	MCS0	1	42	5210	2.57	12.15	24.00	0.38		Pass

Report Number : FR731307D

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.58	2.83	11.00	0.38		Pass
11a	6Mbps	1	44	5220	0.58	2.72	11.00	0.38		Pass
11a	6Mbps	1	48	5240	0.58	3.06	11.00	0.38		Pass
HT20	MCS0	1	36	5180	0.65	2.57	11.00	0.38		Pass
HT20	MCS0	1	44	5220	0.65	2.73	11.00	0.38		Pass
HT20	MCS0	1	48	5240	0.65	2.87	11.00	0.38		Pass
HT40	MCS0	1	38	5190	0.63	-0.18	11.00	0.38		Pass
HT40	MCS0	1	46	5230	0.63	-0.32	11.00	0.38		Pass
VHT80	MCS0	1	42	5210	2.57	-3.94	11.00	0.38		Pass

Report Number : FR731307D

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	18.63	23.38	23.70	29.70	23.98	
11a	6M bps	1	60	5300	18.58	23.58	23.69	29.69	23.98	
11a	6M bps	1	64	5320	18.63	23.58	23.70	29.70	23.98	
HT20	MCS 0	1	52	5260	19.28	24.08	23.85	29.85	23.98	
HT20	MCS 0	1	60	5300	19.28	23.88	23.85	29.85	23.98	
HT20	MCS 0	1	64	5320	19.33	23.83	23.86	29.86	23.98	
HT40	MCS 0	1	54	5270	36.76	44.87	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.56	44.06	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	74.69	83.92	23.98	30.00	23.98	

Report Number : FR731307D

TEST RESULTS DATA
Average Power Table

FCC Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	52	5260	0.58	14.09	23.98	0.22	26.99	Pass
11a	6M bps	1	60	5300	0.58	13.79	23.98	0.22	26.99	Pass
11a	6M bps	1	64	5320	0.58	13.86	23.98	0.22	26.99	Pass
HT20	MCS 0	1	52	5260	0.65	13.96	23.98	0.22	26.99	Pass
HT20	MCS 0	1	60	5300	0.65	13.84	23.98	0.22	26.99	Pass
HT20	MCS 0	1	64	5320	0.65	13.92	23.98	0.22	26.99	Pass
HT40	MCS 0	1	54	5270	0.63	13.95	23.98	0.22	26.99	Pass
HT40	MCS 0	1	62	5310	0.63	13.88	23.98	0.22	26.99	Pass
VHT80	MCS 0	1	58	5290	2.57	12.06	23.98	0.22	26.99	Pass

Report Number : FR731307D

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.58	2.95	11.00	0.22		Pass
11a	6M bps	1	60	5300	0.58	2.62	11.00	0.22		Pass
11a	6M bps	1	64	5320	0.58	2.71	11.00	0.22		Pass
HT20	MCS 0	1	52	5260	0.65	2.54	11.00	0.22		Pass
HT20	MCS 0	1	60	5300	0.65	2.51	11.00	0.22		Pass
HT20	MCS 0	1	64	5320	0.65	2.85	11.00	0.22		Pass
HT40	MCS 0	1	54	5270	0.63	-0.22	11.00	0.22		Pass
HT40	MCS 0	1	62	5310	0.63	-0.30	11.00	0.22		Pass
VHT80	MCS 0	1	58	5290	2.57	-4.29	11.00	0.22		Pass

Report Number : FR731307D

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	100	5500	18.63	23.58	23.70	29.70	23.98	
11a	6M bps	1	116	5580	18.58	23.53	23.69	29.69	23.98	
11a	6M bps	1	140	5700	18.48	23.73	23.67	29.67	23.98	
HT20	MCS 0	1	100	5500	19.33	23.83	23.86	29.86	23.98	
HT20	MCS 0	1	116	5580	19.23	23.93	23.84	29.84	23.98	
HT20	MCS 0	1	140	5700	19.28	24.03	23.85	29.85	23.98	
HT40	MCS 0	1	102	5510	36.76	44.96	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.86	45.58	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.66	45.32	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	74.81	84.40	23.98	30.00	23.98	

Report Number : FR731307D

TEST RESULTS DATA
Average Power Table

FCC Band III										
Mod.	Data Rate	N_{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.58	13.75	23.98	0.37	26.99	Pass
11a	6M bps	1	116	5580	0.58	13.74	23.98	0.37	26.99	Pass
11a	6M bps	1	140	5700	0.58	13.69	23.98	0.37	26.99	Pass
HT20	MCS 0	1	100	5500	0.65	13.80	23.98	0.37	26.99	Pass
HT20	MCS 0	1	116	5580	0.65	13.83	23.98	0.37	26.99	Pass
HT20	MCS 0	1	140	5700	0.65	14.07	23.98	0.37	26.99	Pass
HT40	MCS 0	1	102	5510	0.63	14.01	23.98	0.37	26.99	Pass
HT40	MCS 0	1	110	5550	0.63	13.75	23.98	0.37	26.99	Pass
HT40	MCS 0	1	134	5670	0.63	14.14	23.98	0.37	26.99	Pass
VHT80	MCS 0	1	106	5530	2.57	12.08	23.98	0.37	26.99	Pass

Report Number : FR731307D

TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.58	2.31	11.00	0.37		Pass
11a	6M bps	1	116	5580	0.58	2.64	11.00	0.37		Pass
11a	6M bps	1	140	5700	0.58	2.35	11.00	0.37		Pass
HT20	MCS 0	1	100	5500	0.65	2.27	11.00	0.37		Pass
HT20	MCS 0	1	116	5580	0.65	2.69	11.00	0.37		Pass
HT20	MCS 0	1	140	5700	0.65	1.79	11.00	0.37		Pass
HT40	MCS 0	1	102	5510	0.63	-0.35	11.00	0.37		Pass
HT40	MCS 0	1	110	5550	0.63	-0.67	11.00	0.37		Pass
HT40	MCS 0	1	134	5670	0.63	-0.55	11.00	0.37		Pass
VHT80	MCS 0	1	106	5530	2.57	-4.43	11.00	0.37		Pass

Report Number : FR731307D

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	50	3.85	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	-30	3.85	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	20	4.2	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.5	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	20	3.85	

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	64	5320	5319.975	-0.025	-4.70	50	3.85	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	-30	3.85	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	4.2	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.5	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.85	

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	50	3.85	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	-30	3.85	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	4.2	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.5	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.85	

Appendix B. Radiated Spurious Emission

For Sample 1

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5127.2	50.64	-23.36	74	48.08	31.19	7.91	36.54	100	232	P	H
		5127.52	42.51	-11.49	54	39.95	31.19	7.91	36.54	100	232	A	H
	*	5184	103.64	-	-	101.08	31.14	7.94	36.52	100	232	P	H
	*	5184	95.22	-	-	92.66	31.14	7.94	36.52	100	232	A	H
		5127.52	48.04	-25.96	74	45.48	31.19	7.91	36.54	400	287	P	V
		5127.36	40.39	-13.61	54	37.83	31.19	7.91	36.54	400	287	A	V
	*	5186	101.88	-	-	99.32	31.14	7.94	36.52	400	287	P	V
	*	5186	94.67	-	-	92.11	31.14	7.94	36.52	400	287	A	V
802.11a CH 44 5220MHz		5114.24	45.59	-28.41	74	43.03	31.2	7.91	36.55	100	234	P	H
		5103.2	35.94	-18.06	54	33.38	31.22	7.9	36.56	100	234	A	H
	*	5226	103.46	-	-	100.82	31.09	8.04	36.49	100	234	P	H
	*	5226	96.13	-	-	93.49	31.09	8.04	36.49	100	234	A	H
		5369.22	44.64	-29.36	74	41.71	30.96	8.39	36.42	100	234	P	H
		5389.38	35	-19	54	32.05	30.94	8.43	36.42	100	234	A	H
		5105.92	44.77	-29.23	74	42.21	31.2	7.91	36.55	400	290	P	V
		5104.32	35.85	-18.15	54	33.29	31.22	7.9	36.56	400	290	A	V
	*	5214	100.19	-	-	97.59	31.11	7.99	36.5	400	290	P	V
	*	5214	93.07	-	-	90.47	31.11	7.99	36.5	400	290	A	V
		5369.94	44.25	-29.75	74	41.32	30.96	8.39	36.42	400	290	P	V
		5395.32	34.94	-19.06	54	31.94	30.93	8.48	36.41	400	290	A	V

802.11a CH 48 5240MHz	*	5236	102.01	-	-	99.37	31.09	8.04	36.49	100	230	P	H
	*	5236	94.68	-	-	92.04	31.09	8.04	36.49	100	230	A	H
		5350.68	44.4	-29.6	74	41.51	30.98	8.34	36.43	100	230	P	H
		5384.52	35.19	-18.81	54	32.24	30.94	8.43	36.42	100	230	A	H
	*	5234	99.84	-	-	97.2	31.09	8.04	36.49	400	290	P	V
	*	5234	92.55	-	-	89.91	31.09	8.04	36.49	400	290	A	V
		5371.56	43.72	-30.28	74	40.79	30.96	8.39	36.42	400	290	P	V
		5386.86	35.08	-18.92	54	32.13	30.94	8.43	36.42	400	290	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	40.18	-33.82	74	57.09	37.4	11.84	66.15	100	0	P	H
		10360	42.72	-31.28	74	59.63	37.4	11.84	66.15	300	0	P	V
802.11a CH 44 5220MHz		10440	40.49	-33.51	74	57.23	37.47	11.89	66.1	100	360	P	H
		10440	42.31	-31.69	74	59.05	37.47	11.89	66.1	300	360	P	V
802.11a CH 48 5240MHz		10480	40.77	-33.23	74	57.4	37.52	11.92	66.07	100	0	P	H
		10480	44.3	-29.7	74	60.93	37.52	11.92	66.07	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5127.84	52.44	-21.56	74	49.88	31.19	7.91	36.54	100	228	P	H
		5128	44.52	-9.48	54	41.96	31.19	7.91	36.54	100	228	A	H
	*	5178	103.89	-	-	101.33	31.14	7.94	36.52	100	228	P	H
	*	5178	95.9	-	-	93.34	31.14	7.94	36.52	100	228	A	H
		5128.16	47.4	-26.6	74	44.84	31.19	7.91	36.54	400	301	P	V
		5128.32	39.81	-14.19	54	37.25	31.19	7.91	36.54	400	301	A	V
	*	5182	98.76	-	-	96.2	31.14	7.94	36.52	400	301	P	V
	*	5182	91.69	-	-	89.13	31.14	7.94	36.52	400	301	A	V
802.11n HT20 CH 44 5220MHz		5144.64	46.28	-27.72	74	43.72	31.17	7.92	36.53	318	228	P	H
		5108.32	36.34	-17.66	54	33.78	31.2	7.91	36.55	318	228	A	H
	*	5224	103.59	-	-	100.99	31.11	7.99	36.5	318	228	P	H
	*	5224	95.73	-	-	93.13	31.11	7.99	36.5	318	228	A	H
		5391.9	44.3	-29.7	74	41.35	30.94	8.43	36.42	318	228	P	H
		5390.1	35.14	-18.86	54	32.19	30.94	8.43	36.42	318	228	A	H
		5135.04	45.71	-28.29	74	43.15	31.19	7.91	36.54	397	306	P	V
		5106.72	35.91	-18.09	54	33.35	31.2	7.91	36.55	397	306	A	V
	*	5228	99.49	-	-	96.85	31.09	8.04	36.49	397	306	P	V
	*	5228	92.21	-	-	89.57	31.09	8.04	36.49	397	306	A	V
		5386.5	45.01	-28.99	74	42.06	30.94	8.43	36.42	397	306	P	V
		5387.22	35.06	-18.94	54	32.11	30.94	8.43	36.42	397	306	A	V

802.11n HT20 CH 48 5240MHz	*	5234	103.03	-	-	100.39	31.09	8.04	36.49	318	230	P	H
	*	5234	95.88	-	-	93.24	31.09	8.04	36.49	318	230	A	H
		5367.78	43.82	-30.18	74	40.89	30.96	8.39	36.42	318	230	P	H
		5388.66	35.28	-18.72	54	32.33	30.94	8.43	36.42	318	230	A	H
	*	5236	98.54	-	-	95.9	31.09	8.04	36.49	400	305	P	V
	*	5236	91.79	-	-	89.15	31.09	8.04	36.49	400	305	A	V
		5356.98	44.26	-29.74	74	41.37	30.98	8.34	36.43	400	305	P	V
		5389.56	35.1	-18.9	54	32.15	30.94	8.43	36.42	400	305	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36		10360	42.03	-31.97	74	58.94	37.4	11.84	66.15	100	360	P	H
		10360	42.48	-31.52	74	59.39	37.4	11.84	66.15	100	360	P	V
802.11n HT20 CH 44		10440	39.68	-34.32	74	56.42	37.47	11.89	66.1	100	360	P	H
		10440	44.21	-29.79	74	60.95	37.47	11.89	66.1	100	0	P	V
802.11n HT20 CH 48		10480	41.09	-32.91	74	57.72	37.52	11.92	66.07	100	360	P	H
		10480	45.09	-28.91	74	61.72	37.52	11.92	66.07	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148.64	54.98	-19.02	74	52.42	31.17	7.92	36.53	100	248	P	H
		5149.92	45.49	-8.51	54	42.93	31.17	7.92	36.53	100	248	A	H
	*	5202	99.92	-	-	97.36	31.12	7.95	36.51	100	248	P	H
	*	5202	92.83	-	-	90.27	31.12	7.95	36.51	100	248	A	H
		5377.5	45.03	-28.97	74	42.08	30.94	8.43	36.42	100	248	P	H
		5390.64	35.32	-18.68	54	32.37	30.94	8.43	36.42	100	248	A	H
		5148.96	53.08	-20.92	74	50.52	31.17	7.92	36.53	346	296	P	V
		5149.6	43.63	-10.37	54	41.07	31.17	7.92	36.53	346	296	A	V
	*	5202	98.92	-	-	96.36	31.12	7.95	36.51	346	296	P	V
	*	5202	91.61	-	-	89.05	31.12	7.95	36.51	346	296	A	V
		5370.3	43.79	-30.21	74	40.86	30.96	8.39	36.42	346	296	P	V
		5393.52	35.45	-18.55	54	32.5	30.94	8.43	36.42	346	296	A	V
802.11n HT40 CH 46 5230MHz		5126.24	48.94	-25.06	74	46.38	31.19	7.91	36.54	100	228	P	H
		5127.2	39.86	-14.14	54	37.3	31.19	7.91	36.54	100	228	A	H
	*	5218	100.08	-	-	97.48	31.11	7.99	36.5	100	228	P	H
	*	5218	92.5	-	-	89.9	31.11	7.99	36.5	100	228	A	H
		5399.64	44.57	-29.43	74	41.57	30.93	8.48	36.41	100	228	P	H
		5387.94	35.5	-18.5	54	32.55	30.94	8.43	36.42	100	228	A	H
		5126.08	46.76	-27.24	74	44.2	31.19	7.91	36.54	324	283	P	V
		5126.72	38.36	-15.64	54	35.8	31.19	7.91	36.54	324	283	A	V
	*	5222	97.96	-	-	95.36	31.11	7.99	36.5	324	283	P	V
	*	5222	90.87	-	-	88.27	31.11	7.99	36.5	324	283	A	V
		5381.46	43.91	-30.09	74	40.96	30.94	8.43	36.42	324	283	P	V
		5389.2	35.29	-18.71	54	32.34	30.94	8.43	36.42	324	283	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38		10380	41.32	-32.68	74	58.2	37.41	11.85	66.14	300	360	P	H
		10380	43.65	-30.35	74	60.53	37.41	11.85	66.14	300	360	P	V
802.11n HT40 CH 46		10460	41.28	-32.72	74	57.98	37.49	11.9	66.09	100	360	P	H
		10460	44.54	-29.46	74	61.24	37.49	11.9	66.09	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5121.28	54.46	-19.54	74	51.9	31.2	7.91	36.55	100	50	P	H
		5147.52	47.49	-6.51	54	44.93	31.17	7.92	36.53	100	50	A	H
	*	5190	96.21	-	-	93.65	31.14	7.94	36.52	100	50	P	H
	*	5190	89.29	-	-	86.73	31.14	7.94	36.52	100	50	A	H
		5388.84	44.6	-29.4	74	41.65	30.94	8.43	36.42	100	50	P	H
		5364.9	36.63	-17.37	54	33.7	30.96	8.39	36.42	100	50	A	H
		5140.48	51.62	-22.38	74	49.06	31.17	7.92	36.53	316	125	P	V
		5147.52	44.47	-9.53	54	41.91	31.17	7.92	36.53	316	125	A	V
	*	5214	92.4	-	-	89.8	31.11	7.99	36.5	316	125	P	V
	*	5214	85.9	-	-	83.3	31.11	7.99	36.5	316	125	A	V
		5353.56	44.39	-29.61	74	41.5	30.98	8.34	36.43	316	125	P	V
		5393.88	36.46	-17.54	54	33.51	30.94	8.43	36.42	316	125	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42		10420	41.72	-32.28	74	58.51	37.45	11.88	66.12	100	0	P	H
		10420	44.19	-29.81	74	60.98	37.45	11.88	66.12	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5124.64	45.23	-28.77	74	42.67	31.19	7.91	36.54	100	232	P	H
		5106.88	35.95	-18.05	54	33.39	31.2	7.91	36.55	100	232	A	H
	*	5262	101.88	-	-	99.17	31.06	8.12	36.47	100	232	P	H
	*	5262	95.08	-	-	92.37	31.06	8.12	36.47	100	232	A	H
		5108.16	45.48	-28.52	74	42.92	31.2	7.91	36.55	388	283	P	V
		5107.36	35.94	-18.06	54	33.38	31.2	7.91	36.55	388	283	A	V
	*	5264	100.86	-	-	98.15	31.06	8.12	36.47	388	283	P	V
	*	5264	93.64	-	-	90.93	31.06	8.12	36.47	388	283	A	V
802.11a CH 60 5300MHz		5129.92	45.67	-28.33	74	43.11	31.19	7.91	36.54	100	233	P	H
		5104.16	36.06	-17.94	54	33.5	31.22	7.9	36.56	100	233	A	H
	*	5304	103.15	-	-	100.38	31.02	8.21	36.46	100	233	P	H
	*	5304	95.69	-	-	92.92	31.02	8.21	36.46	100	233	A	H
		5352.8	48.86	-25.14	74	45.97	30.98	8.34	36.43	100	233	P	H
		5352.8	42.24	-11.76	54	39.35	30.98	8.34	36.43	100	233	A	H
		5114.4	44.79	-29.21	74	42.23	31.2	7.91	36.55	400	283	P	V
		5105.6	36.02	-17.98	54	33.46	31.2	7.91	36.55	400	283	A	V
	*	5304	100.74	-	-	97.97	31.02	8.21	36.46	400	283	P	V
	*	5304	93.03	-	-	90.26	31.02	8.21	36.46	400	283	A	V
		5352.6	46.7	-27.3	74	43.81	30.98	8.34	36.43	400	283	P	V
		5352.5	39.75	-14.25	54	36.86	30.98	8.34	36.43	400	283	A	V

802.11a CH 64 5320MHz	*	5318	102.4	-	-	99.58	31.01	8.26	36.45	100	236	P	H
	*	5318	94.35	-	-	91.53	31.01	8.26	36.45	100	236	A	H
		5372.3	47.15	-26.85	74	44.22	30.96	8.39	36.42	100	236	P	H
		5372.3	41.28	-12.72	54	38.35	30.96	8.39	36.42	100	236	A	H
	*	5324	100.61	-	-	97.79	31.01	8.26	36.45	400	287	P	V
	*	5324	93.68	-	-	90.86	31.01	8.26	36.45	400	287	A	V
		5372.3	46.11	-27.89	74	43.18	30.96	8.39	36.42	400	287	P	V
		5372.6	39.06	-14.94	54	36.13	30.96	8.39	36.42	400	287	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	41.25	-32.75	74	57.79	37.56	11.94	66.04	100	360	P	H
		10520	43.62	-30.38	74	60.16	37.56	11.94	66.04	100	0	P	V
802.11a CH 60 5300MHz		10600	41.33	-32.67	74	57.66	37.65	12	65.98	100	360	P	H
		10600	45.36	-28.64	74	61.69	37.65	12	65.98	300	0	P	V
802.11a CH 64 5320MHz		10640	41.19	-32.81	74	57.45	37.68	12.02	65.96	300	360	P	H
		10640	43.98	-30.02	74	60.24	37.68	12.02	65.96	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5101.28	46.33	-27.67	74	43.77	31.22	7.9	36.56	302	231	P	H
		5104	36.27	-17.73	54	33.71	31.22	7.9	36.56	302	231	A	H
	*	5266	103.84	-	-	101.13	31.06	8.12	36.47	302	231	P	H
	*	5266	95.74	-	-	93.03	31.06	8.12	36.47	302	231	A	H
		5114.08	45.96	-28.04	74	43.4	31.2	7.91	36.55	389	282	P	V
		5110.4	36.23	-17.77	54	33.67	31.2	7.91	36.55	389	282	A	V
	*	5264	100.39	-	-	97.68	31.06	8.12	36.47	389	282	P	V
	*	5264	93.03	-	-	90.32	31.06	8.12	36.47	389	282	A	V
802.11n HT20 CH 60 5300MHz		5141.6	45.56	-28.44	74	43	31.17	7.92	36.53	100	231	P	H
		5101.92	36.72	-17.28	54	34.16	31.22	7.9	36.56	100	231	A	H
	*	5294	103.48	-	-	100.71	31.02	8.21	36.46	100	231	P	H
	*	5294	96.01	-	-	93.24	31.02	8.21	36.46	100	231	A	H
		5352.3	50.06	-23.94	74	47.17	30.98	8.34	36.43	100	231	P	H
		5351.7	43.3	-10.7	54	40.41	30.98	8.34	36.43	100	231	A	H
		5133.28	45.33	-28.67	74	42.77	31.19	7.91	36.54	400	300	P	V
		5104.96	36.43	-17.57	54	33.87	31.22	7.9	36.56	400	300	A	V
	*	5296	100.16	-	-	97.39	31.02	8.21	36.46	400	300	P	V
	*	5296	92.82	-	-	90.05	31.02	8.21	36.46	400	300	A	V
		5352.2	47.7	-26.3	74	44.81	30.98	8.34	36.43	400	300	P	V
		5351.9	40.97	-13.03	54	38.08	30.98	8.34	36.43	400	300	A	V

802.11n HT20 CH 64 5320MHz	*	5318	102.99	-	-	100.17	31.01	8.26	36.45	100	230	P	H
	*	5318	95.39	-	-	92.57	31.01	8.26	36.45	100	230	A	H
		5372.1	48.6	-25.4	74	45.67	30.96	8.39	36.42	100	230	P	H
		5371.7	43.07	-10.93	54	40.14	30.96	8.39	36.42	100	230	A	H
	*	5322	100.87	-	-	98.05	31.01	8.26	36.45	400	296	P	V
	*	5322	93.8	-	-	90.98	31.01	8.26	36.45	400	296	A	V
		5372.5	47.03	-26.97	74	44.1	30.96	8.39	36.42	400	296	P	V
		5371.8	40.59	-13.41	54	37.66	30.96	8.39	36.42	400	296	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52		10520	40.27	-33.73	74	56.81	37.56	11.94	66.04	100	0	P	H
		10520	43.16	-30.84	74	59.7	37.56	11.94	66.04	300	0	P	V
802.11n HT20 CH 60		10600	40.72	-33.28	74	57.05	37.65	12	65.98	100	0	P	H
		10600	44.98	-29.02	74	61.31	37.65	12	65.98	300	0	P	V
802.11n HT20 CH 64		10640	40.36	-33.64	74	56.62	37.68	12.02	65.96	100	0	P	H
		10640	43.38	-30.62	74	59.64	37.68	12.02	65.96	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5117.44	45.73	-28.27	74	43.17	31.2	7.91	36.55	100	229	P	H
		5137.44	36.34	-17.66	54	33.78	31.19	7.91	36.54	100	229	A	H
	*	5256	99.17	-	-	96.5	31.07	8.08	36.48	100	229	P	H
	*	5256	91.97	-	-	89.3	31.07	8.08	36.48	100	229	A	H
		5374.3	45.87	-28.13	74	42.94	30.96	8.39	36.42	100	229	P	H
		5372.7	37.74	-16.26	54	34.81	30.96	8.39	36.42	100	229	A	H
		5102.88	45.45	-28.55	74	42.89	31.22	7.9	36.56	400	290	P	V
		5138.4	36.18	-17.82	54	33.62	31.19	7.91	36.54	400	290	A	V
	*	5276	99.75	-	-	97.01	31.04	8.17	36.47	400	290	P	V
	*	5276	91.13	-	-	88.39	31.04	8.17	36.47	400	290	A	V
		5373.7	45.77	-28.23	74	42.84	30.96	8.39	36.42	400	290	P	V
		5372.9	37.39	-16.61	54	34.46	30.96	8.39	36.42	400	290	A	V
802.11n HT40 CH 62 5310MHz		5145.6	45.05	-28.95	74	42.49	31.17	7.92	36.53	100	250	P	H
		5104	36.21	-17.79	54	33.65	31.22	7.9	36.56	100	250	A	H
	*	5298	98.72	-	-	95.95	31.02	8.21	36.46	100	250	P	H
	*	5298	91.21	-	-	88.44	31.02	8.21	36.46	100	250	A	H
		5355.5	50.09	-23.91	74	47.2	30.98	8.34	36.43	100	250	P	H
		5350.1	40.54	-13.46	54	37.65	30.98	8.34	36.43	100	250	A	H
		5118.88	45.44	-28.56	74	42.88	31.2	7.91	36.55	303	283	P	V
		5106.24	36.2	-17.8	54	33.64	31.2	7.91	36.55	303	283	A	V
	*	5302	97.78	-	-	95.01	31.02	8.21	36.46	303	283	P	V
	*	5302	90.15	-	-	87.38	31.02	8.21	36.46	303	283	A	V
		5357	50.08	-23.92	74	47.19	30.98	8.34	36.43	303	283	P	V
		5350.4	39.42	-14.58	54	36.53	30.98	8.34	36.43	303	283	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54		10540	40.98	-33.02	74	57.48	37.58	11.95	66.03	100	360	P	H
		10540	44.15	-29.85	74	60.65	37.58	11.95	66.03	300	360	P	V
802.11n HT40 CH 62		10620	42.31	-31.69	74	58.6	37.67	12.01	65.97	300	0	P	H
		10620	45.74	-28.26	74	62.03	37.67	12.01	65.97	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5115.2	45.16	-28.84	74	42.6	31.2	7.91	36.55	100	51	P	H
		5110.56	37.7	-16.3	54	35.14	31.2	7.91	36.55	100	51	A	H
	*	5284	95.35	-	-	92.61	31.04	8.17	36.47	100	51	P	H
	*	5284	88.53	-	-	85.79	31.04	8.17	36.47	100	51	A	H
		5372.2	52.42	-21.58	74	49.49	30.96	8.39	36.42	100	51	P	H
		5355.9	42.02	-11.98	54	39.13	30.98	8.34	36.43	100	51	A	H
		5126.08	46	-28	74	43.44	31.19	7.91	36.54	400	88	P	V
		5109.76	37.72	-16.28	54	35.16	31.2	7.91	36.55	400	88	A	V
	*	5270	93.77	-	-	91.06	31.06	8.12	36.47	400	88	P	V
	*	5270	86.74	-	-	84.03	31.06	8.12	36.47	400	88	A	V
		5357.8	49.21	-24.79	74	46.32	30.98	8.34	36.43	400	88	P	V
		5350.6	39.3	-14.7	54	36.41	30.98	8.34	36.43	400	88	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58		10580	40.01	-33.99	74	56.39	37.63	11.99	66	100	0	P	H
		10580	43.75	-30.25	74	60.13	37.63	11.99	66	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5447.6	46.79	-27.21	74	43.91	30.88	8.38	36.38	100	193	P	H
		5447.44	40.3	-13.7	54	37.42	30.88	8.38	36.38	100	193	A	H
	*	5496	98.97	-	-	96.17	30.85	8.32	36.37	100	193	P	H
	*	5496	92.05	-	-	89.25	30.85	8.32	36.37	100	193	A	H
		5446.48	45.49	-28.51	74	42.61	30.88	8.38	36.38	376	291	P	V
		5447.92	38.26	-15.74	54	35.38	30.88	8.38	36.38	376	291	A	V
	*	5504	97.48	-	-	94.72	30.83	8.29	36.36	376	291	P	V
	*	5504	90.48	-	-	87.72	30.83	8.29	36.36	376	291	A	V
802.11a CH 116 5580MHz		5449.52	44.89	-29.11	74	42.01	30.88	8.38	36.38	100	185	P	H
		5453.52	35.54	-18.46	54	32.66	30.88	8.38	36.38	100	185	A	H
	*	5578	100.43	-	-	97.83	30.76	8.16	36.32	100	185	P	H
	*	5578	93.22	-	-	90.62	30.76	8.16	36.32	100	185	A	H
		5748.36	46.52	-27.48	74	43.02	31.44	8.34	36.28	100	185	P	H
		5764.2	36.15	-17.85	54	32.5	31.56	8.37	36.28	100	185	A	H
		5452.4	44.1	-29.9	74	41.22	30.88	8.38	36.38	400	279	P	V
		5458.32	35.48	-18.52	54	32.6	30.88	8.38	36.38	400	279	A	V
	*	5584	97.79	-	-	95.23	30.75	8.13	36.32	400	279	P	V
	*	5584	90.55	-	-	87.99	30.75	8.13	36.32	400	279	A	V
		5745.16	45.2	-28.8	74	41.7	31.44	8.34	36.28	400	279	P	V
		5764.68	36.08	-17.92	54	32.43	31.56	8.37	36.28	400	279	A	V

802.11a CH 140 5700MHz	*	5694	98.16	-	-	95.13	31.07	8.25	36.29	100	185	P	H
	*	5694	90.98	-	-	87.95	31.07	8.25	36.29	100	185	A	H
		5752.36	47.87	-26.13	74	44.22	31.56	8.37	36.28	100	185	P	H
		5752.36	39.34	-14.66	54	35.69	31.56	8.37	36.28	100	185	A	H
	*	5704	96.17	-	-	92.98	31.19	8.28	36.28	400	250	P	V
	*	5704	88.99	-	-	85.8	31.19	8.28	36.28	400	250	A	V
		5752.2	46.25	-27.75	74	42.6	31.56	8.37	36.28	400	250	P	V
		5752.76	38.1	-15.9	54	34.45	31.56	8.37	36.28	400	250	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	43.12	-30.88	74	58.51	38.06	12.25	65.7	300	360	P	H
		11000	44.89	-29.11	74	60.28	38.06	12.25	65.7	300	3	P	V
802.11a CH 116 5580MHz		11160	41.14	-32.86	74	56.12	38.24	12.36	65.58	100	0	P	H
		11160	46.66	-27.34	74	61.64	38.24	12.36	65.58	300	0	P	V
802.11a CH 140 5700MHz		11400	41.04	-32.96	74	55.44	38.49	12.52	65.41	100	360	P	H
		11400	45.72	-28.28	74	60.12	38.49	12.52	65.41	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5448.72	50.73	-23.27	74	47.85	30.88	8.38	36.38	400	188	P	H
		5448.24	43.81	-10.19	54	40.93	30.88	8.38	36.38	400	188	A	H
	*	5506	103.62	-	-	100.86	30.83	8.29	36.36	400	188	P	H
	*	5506	96.42	-	-	93.66	30.83	8.29	36.36	400	188	A	H
		5447.6	46.89	-27.11	74	44.01	30.88	8.38	36.38	357	300	P	V
		5448.24	40.64	-13.36	54	37.76	30.88	8.38	36.38	357	300	A	V
	*	5506	98.58	-	-	95.82	30.83	8.29	36.36	357	300	P	V
	*	5506	90.86	-	-	88.1	30.83	8.29	36.36	357	300	A	V
802.11n HT20 CH 116 5580MHz		5466.48	44.58	-29.42	74	41.74	30.86	8.35	36.37	395	184	P	H
		5440.88	36.08	-17.92	54	33.17	30.89	8.41	36.39	395	184	A	H
	*	5584	103.15	-	-	100.59	30.75	8.13	36.32	395	184	P	H
	*	5584	95.68	-	-	93.12	30.75	8.13	36.32	395	184	A	H
		5740.6	45.73	-28.27	74	42.23	31.44	8.34	36.28	395	184	P	H
		5750.44	36.4	-17.6	54	32.9	31.44	8.34	36.28	395	184	A	H
		5415.28	44.83	-29.17	74	41.88	30.91	8.44	36.4	400	277	P	V
		5443.76	35.95	-18.05	54	33.04	30.89	8.41	36.39	400	277	A	V
	*	5572	98.86	-	-	96.26	30.76	8.16	36.32	400	277	P	V
	*	5572	91.54	-	-	88.94	30.76	8.16	36.32	400	277	A	V
		5756.2	45.76	-28.24	74	42.11	31.56	8.37	36.28	400	277	P	V
		5745.64	36.43	-17.57	54	32.93	31.44	8.34	36.28	400	277	A	V

802.11n HT20 CH 140 5700MHz	*	5696	102	-	-	98.97	31.07	8.25	36.29	400	185	P	H
	*	5696	94.91	-	-	91.88	31.07	8.25	36.29	400	185	A	H
		5725.01	48.57	-25.43	74	45.22	31.32	8.31	36.28	400	185	P	H
		5751.64	40.46	-13.54	54	36.81	31.56	8.37	36.28	400	185	A	H
	*	5704	97.39	-	-	94.2	31.19	8.28	36.28	388	251	P	V
	*	5704	90.09	-	-	86.9	31.19	8.28	36.28	388	251	A	V
		5752.2	46.63	-27.37	74	42.98	31.56	8.37	36.28	388	251	P	V
		5751.72	39.32	-14.68	54	35.67	31.56	8.37	36.28	388	251	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100		11000	43.64	-30.36	74	59.03	38.06	12.25	65.7	300	0	P	H
		11000	45.45	-28.55	74	60.84	38.06	12.25	65.7	300	0	P	V
802.11n HT20 CH 116		11160	42.74	-31.26	74	57.72	38.24	12.36	65.58	300	0	P	H
		11160	47.75	-26.25	74	62.73	38.24	12.36	65.58	300	0	P	V
802.11n HT20 CH 140		11400	41.91	-32.09	74	56.31	38.49	12.52	65.41	300	0	P	H
		11400	46.39	-27.61	74	60.79	38.49	12.52	65.41	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5467.12	53.11	-20.89	74	50.27	30.86	8.35	36.37	100	253	P	H
		5469.99	42.52	-11.48	54	39.68	30.86	8.35	36.37	100	253	A	H
	*	5498	97.84	-	-	95.08	30.83	8.29	36.36	100	253	P	H
	*	5498	90.88	-	-	88.12	30.83	8.29	36.36	100	253	A	H
		5725.72	45.87	-28.13	74	42.52	31.32	8.31	36.28	100	253	P	H
		5751.64	36.13	-17.87	54	32.48	31.56	8.37	36.28	100	253	A	H
		5465.36	50.03	-23.97	74	47.19	30.86	8.35	36.37	301	320	P	V
		5469.52	41.11	-12.89	54	38.27	30.86	8.35	36.37	301	320	A	V
	*	5498	96.72	-	-	93.96	30.83	8.29	36.36	301	320	P	V
	*	5498	89.75	-	-	86.99	30.83	8.29	36.36	301	320	A	V
		5756.04	45.21	-28.79	74	41.56	31.56	8.37	36.28	301	320	P	V
		5755.48	36.12	-17.88	54	32.47	31.56	8.37	36.28	301	320	A	V
802.11n HT40 CH 110 5550MHz		5447.28	47.55	-26.45	74	44.67	30.88	8.38	36.38	400	188	P	H
		5446.96	39.1	-14.9	54	36.22	30.88	8.38	36.38	400	188	A	H
	*	5558	99.95	-	-	97.3	30.78	8.2	36.33	400	188	P	H
	*	5558	93.09	-	-	90.44	30.78	8.2	36.33	400	188	A	H
		5742.36	45.2	-28.8	74	41.7	31.44	8.34	36.28	400	188	P	H
		5763.16	36.22	-17.78	54	32.57	31.56	8.37	36.28	400	188	A	H
		5465.68	45.17	-28.83	74	42.33	30.86	8.35	36.37	378	271	P	V
		5447.28	37.69	-16.31	54	34.81	30.88	8.38	36.38	378	271	A	V
	*	5540	96.31	-	-	93.62	30.8	8.23	36.34	378	271	P	V
	*	5540	88.95	-	-	86.26	30.8	8.23	36.34	378	271	A	V
		5761.72	45.56	-28.44	74	41.91	31.56	8.37	36.28	378	271	P	V
		5755.32	36.25	-17.75	54	32.6	31.56	8.37	36.28	378	271	A	V

802.11n HT40 CH 134 5670MHz		5428.24	45.36	-28.64	74	42.41	30.91	8.44	36.4	400	184	P	H
		5464.56	35.81	-18.19	54	32.97	30.86	8.35	36.37	400	184	A	H
	*	5674	100.82	-	-	97.94	30.95	8.22	36.29	400	184	P	H
	*	5674	93.2	-	-	90.32	30.95	8.22	36.29	400	184	A	H
		5729.88	47.17	-26.83	74	43.82	31.32	8.31	36.28	400	184	P	H
		5725.24	38.41	-15.59	54	35.06	31.32	8.31	36.28	400	184	A	H
		5454.64	44.61	-29.39	74	41.73	30.88	8.38	36.38	318	316	P	V
		5451.12	35.53	-18.47	54	32.65	30.88	8.38	36.38	318	316	A	V
	*	5662	94.42	-	-	91.7	30.82	8.19	36.29	318	316	P	V
	*	5662	87.15	-	-	84.43	30.82	8.19	36.29	318	316	A	V
		5725.16	45.76	-28.24	74	42.41	31.32	8.31	36.28	318	316	P	V
		5741	36.25	-17.75	54	32.75	31.44	8.34	36.28	318	316	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102		11020	42.23	-31.77	74	57.58	38.08	12.26	65.69	100	0	P	H
		11020	46.22	-27.78	74	61.57	38.08	12.26	65.69	300	0	P	V
802.11n HT40 CH 110		11100	43.12	-30.88	74	58.26	38.17	12.32	65.63	100	360	P	H
		11100	47.43	-26.57	74	62.57	38.17	12.32	65.63	300	360	P	V
802.11n HT40 CH 134		11340	42.4	-31.6	74	56.97	38.42	12.47	65.46	100	360	P	H
		11340	46.7	-27.3	74	61.27	38.42	12.47	65.46	300	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5458.96	50.96	-23.04	74	48.08	30.88	8.38	36.38	400	6	P	H
		5469.84	43.18	-10.82	54	40.34	30.86	8.35	36.37	400	6	A	H
	*	5540	95.12	-	-	92.43	30.8	8.23	36.34	400	6	P	H
	*	5540	89.49	-	-	86.8	30.8	8.23	36.34	400	6	A	H
		5737.24	44.98	-29.02	74	41.48	31.44	8.34	36.28	400	6	P	H
		5732.44	37.75	-16.25	54	34.4	31.32	8.31	36.28	400	6	A	H
		5462.16	50.8	-23.2	74	47.92	30.88	8.38	36.38	392	116	P	V
		5469.36	41.53	-12.47	54	38.69	30.86	8.35	36.37	392	116	A	V
	*	5524	92.5	-	-	89.78	30.81	8.26	36.35	392	116	P	V
	*	5524	86.17	-	-	83.45	30.81	8.26	36.35	392	116	A	V
		5753.4	45.19	-28.81	74	41.54	31.56	8.37	36.28	392	116	P	V
		5762.84	37.6	-16.4	54	33.95	31.56	8.37	36.28	392	116	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106		11060	42.65	-31.35	74	57.88	38.13	12.3	65.66	100	360	P	H
		11060	45.3	-28.7	74	60.53	38.13	12.3	65.66	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11 ac VHT80 LF		34.85	27.28	-12.72	40	32.51	25.5	0.62	31.35	-	-	P	H
		57.16	23.27	-16.73	40	39.45	14.14	1.09	31.41	-	-	P	H
		159.01	34.08	-9.42	43.5	46.66	17.53	1.43	31.54	-	-	P	H
		198.78	37.65	-5.85	43.5	51.49	15.84	1.81	31.49	100	256	P	H
		268.62	31.29	-14.71	46	43.18	17.81	1.73	31.43	-	-	P	H
		478.14	26.88	-19.12	46	31.42	24.25	2.46	31.25	-	-	P	H
		30.97	33.98	-6.02	40	37.95	26.86	0.46	31.29	-	-	P	V
		43.58	35.71	-4.29	40	46.38	20	0.74	31.41	200	47	P	V
		82.38	24.84	-15.16	40	39.22	16.2	0.95	31.53	-	-	P	V
		196.84	29.05	-14.45	43.5	42.85	15.92	1.77	31.49	-	-	P	V
		204.6	28.91	-14.59	43.5	42.68	15.93	1.79	31.49	-	-	P	V
		323.91	24.77	-21.23	46	34.04	20.13	1.9	31.3	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

For Sample 2

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5141.12	55.58	-18.42	74	53.02	31.17	7.92	36.53	301	232	P	H
		5133.44	45.25	-8.75	54	42.69	31.19	7.91	36.54	301	232	A	H
	*	5214	97.36	-	-	94.76	31.11	7.99	36.5	301	232	P	H
	*	5214	91.04	-	-	88.44	31.11	7.99	36.5	301	232	A	H
		5395.86	44.46	-29.54	74	41.46	30.93	8.48	36.41	301	232	P	H
		5395.32	36.96	-17.04	54	33.96	30.93	8.48	36.41	301	232	A	H
		5140.32	52.07	-21.93	74	49.51	31.17	7.92	36.53	396	297	P	V
		5149.6	42.72	-11.28	54	40.16	31.17	7.92	36.53	396	297	A	V
	*	5190	93.88	-	-	91.32	31.14	7.94	36.52	396	297	P	V
	*	5190	87.75	-	-	85.19	31.14	7.94	36.52	396	297	A	V
		5397.66	44.41	-29.59	74	41.41	30.93	8.48	36.41	396	297	P	V
		5355.72	36.78	-17.22	54	33.89	30.98	8.34	36.43	396	297	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42		10420	42.96	-31.04	74	59.75	37.45	11.88	66.12	100	360	P	H
		10420	42.11	-31.89	74	58.9	37.45	11.88	66.12	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

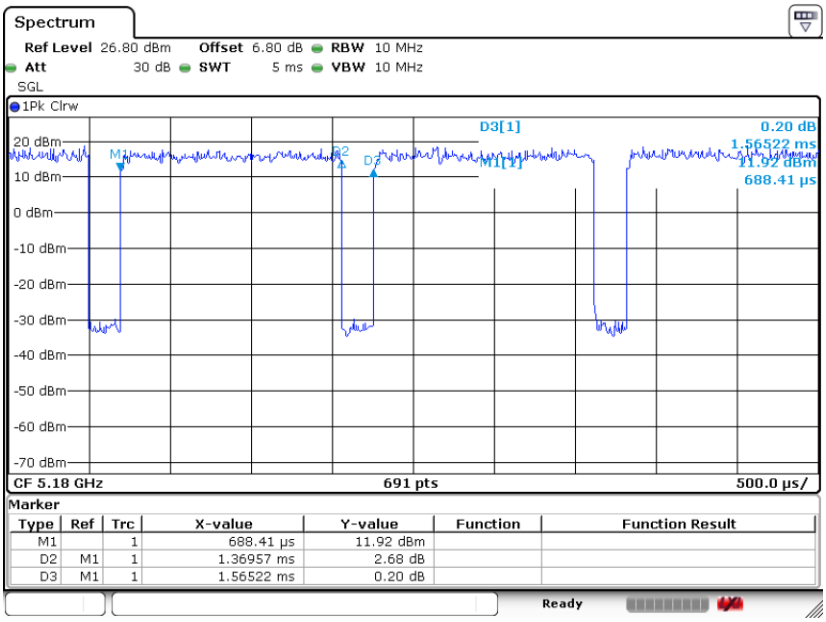
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

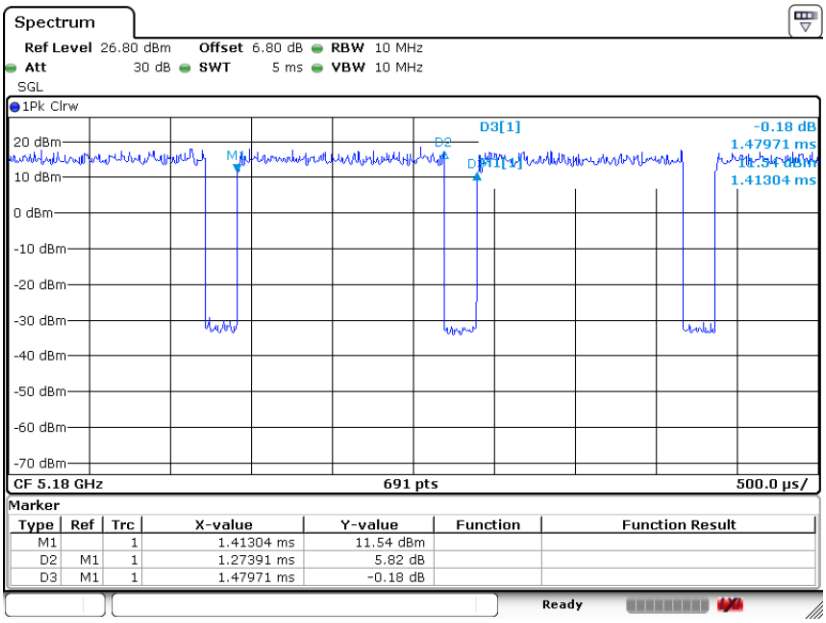
Appendix C. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	87.50	1.370	0.730	1kHz
802.11n HT20	86.09	1.274	0.785	1kHz
802.11n HT40	86.56	1.232	0.812	1kHz
802.11ac VHT80	55.34	0.248	4.035	10kHz

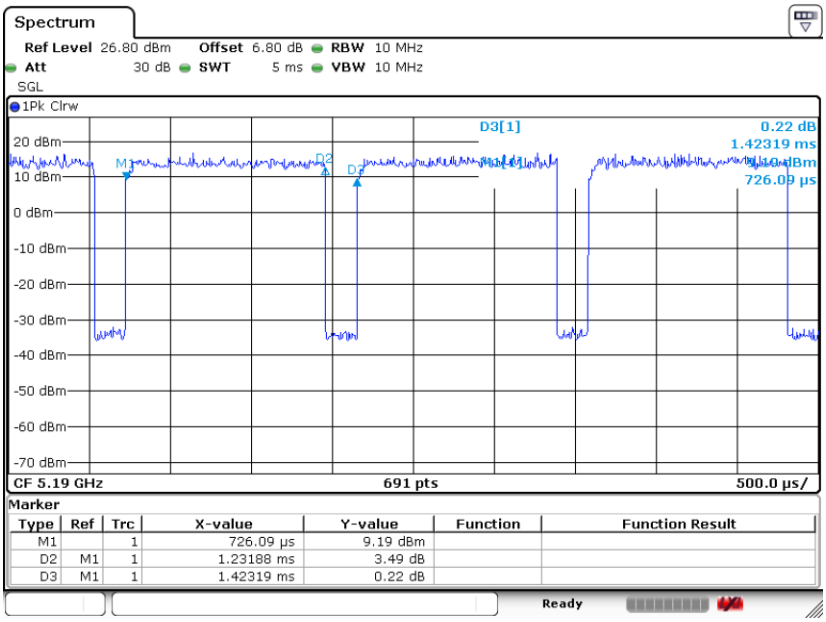
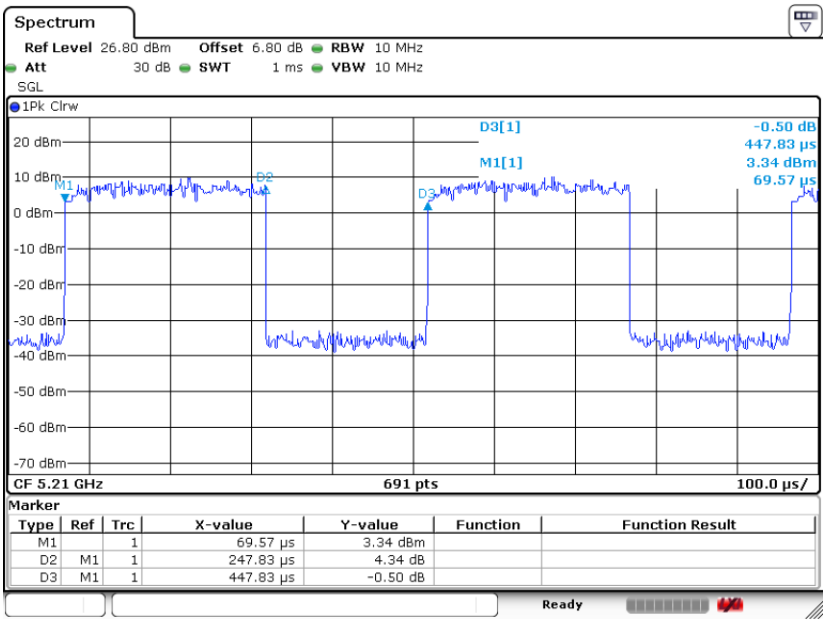
802.11a



802.11n HT20



802.11n HT40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