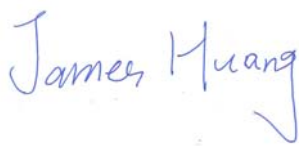


FCC RF Test Report

APPLICANT : Lenovo Mobile Communication Technology Ltd.
EQUIPMENT : Lenovo Mobile Phone
BRAND NAME : Lenovo
MODEL NAME : Lenovo A7010a48
FCC ID : YCNA7010A48
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Nov. 23, 2015 and testing was completed on Dec. 07, 2015. 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.



Prepared by: James Huang / Manager



Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR5N2306E	Rev. 01	Initial issue of report	Dec. 11, 2015

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	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 1.83 dB at 10362.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.38 dB at 0.150 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 Mobile Communication Technology Ltd.

No.999, Qishan North 2nd Road, Information & Optoelectronics Park, Torch Hi-tech Industry Development Zone, Xiamen, P.R.China

1.2 Manufacturer

Lenovo PC HK Limited

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

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Lenovo Mobile Phone
Brand Name	Lenovo
Model Name	Lenovo A7010a48
FCC ID	YCNA7010A48
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+/LTE/NFC/ WLAN2.4GHz 802.11b/g/n HT20/HT40/ WLAN5GHz 802.11a/n HT20/HT40/ WLAN5GHz 802.11ac VHT20/VHT40/VHT80/ Bluetooth v3.0+EDR/ Bluetooth v4.0 LE
IMEI Code	Conducted: 867802021072492/867802021072500 Radiation: 867802021071635/867802021071643 Conduction: 867802020035011/867802020035029 867802020030798/867802020030806
HW Version	H205
SW Version	A7010a48_ENG_S100_1508010
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

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 14.48 dBm / 0.0281 W 802.11n HT20 : 14.41 dBm / 0.0276 W 802.11n HT40 : 13.95 dBm / 0.0248 W 802.11ac VHT20 : 13.39 dBm / 0.0218 W 802.11ac VHT40 : 12.78 dBm / 0.0190 W 802.11ac VHT80 : 13.43 dBm / 0.0220 W <5260 MHz ~ 5320 MHz> 802.11a : 14.21 dBm / 0.0264 W 802.11n HT20 : 13.91 dBm / 0.0246 W 802.11n HT40 : 14.16 dBm / 0.0261 W 802.11ac VHT20 : 12.82 dBm / 0.0191 W 802.11ac VHT40 : 13.35 dBm / 0.0216 W 802.11ac VHT80 : 13.22 dBm / 0.0210 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.33 MHz 802.11n HT20 : 18.23 MHz 802.11n HT40 : 36.16 MHz 802.11ac VHT20: 18.18 MHz 802.11ac VHT40 : 36.26 MHz 802.11ac VHT80 : 75.52 MHz <5260 MHz ~ 5320 MHz> 802.11a : 17.38 MHz 802.11n HT20 : 18.23 MHz 802.11n HT40 : 36.26 MHz 802.11ac VHT20: 18.18 MHz 802.11ac VHT40 : 36.46 MHz 802.11ac VHT80 : 75.40 MHz
Antenna Type	PIFA Antenna
Antenna Gain	<5180 MHz ~ 5240 MHz> : -2.03 dBi <5260 MHz ~ 5320 MHz> : -2.08 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

1.5 Modification of EUT

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

1.6 Component List

Note: There are two types of EUT, the details refer the following table.

Component	Sample 1	Sample 2
Front camera	QTECH F5693AQ	O-film L5693F20
Back Camera	O-film L3M2A00	SUNNY F13S05P
LCD Panel	Tianma TL055VDP47-00	BOE BS055FHM-A00-6904
Battery	Lenovo(SCUD) BL256	Lenovo(Veken) BL256
Memory	Samsung KM4Z0013M-B809	Hynix H9TQ26ABJTM CUR-KUM

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.		
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958		
Test Site No.	Sporton Site No.		FCC Registration No.
	TH01-KS	03CH03-KS	CO01-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 v01
- 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.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

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		

Note: The above Frequency and Channel in boldface were 802.11n HT40.

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

5GHz 802.11a RF Output Power (dBm)										
Power vs. Channel			Power vs. MCS Index							
Channel	Frequency (MHz)	MCS Index 6Mbps	Channel	9M bps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 36	5180	13.82	CH 48	13.91	13.85	13.92	13.89	14.45	14.43	14.33
CH 44	5220	13.04								13.59
CH 48	5240	14.02								14.48
CH 52	5260	13.23	CH 64	13.49	13.53	13.51	13.55	14.12	14.15	13.81
CH 60	5300	12.73								13.28
CH 64	5320	13.57								14.21

5GHz 802.11n HT20 RF Output Power (dBm)										
Power vs. Channel			Power vs. MCS Index							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 36	5180	13.45	CH 48	13.68	13.71	13.65	13.67	14.36	14.38	13.96
CH 44	5220	12.81								13.29
CH 48	5240	13.75								14.41
CH 52	5260	12.91	CH 64	13.23	13.18	13.24	13.28	13.82	13.88	13.54
CH 60	5300	12.65								13.28
CH 64	5320	13.26								13.91

5GHz 802.11n HT40 RF Output Power (dBm)										
Power vs. Channel			Power vs. MCS Index							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 38	5190	13.23	CH 38	13.15	13.18	13.21	13.20	13.87	13.91	13.95
CH 46	5230	13.11								13.69
CH 54	5270	13.58	CH 62	13.63	13.65	13.69	13.71	14.09	14.12	14.14
CH 62	5310	13.72								14.16



WLAN 5GHz 802.11ac VHT20 Average Power (dBm)											
Power vs. Channel			Power vs. MCS Index								
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
CH 36	5180	12.58	CH 48	12.65	12.74	12.76	12.81	13.34	13.17	13.37	13.08
CH 44	5220	11.95							12.63		
CH 48	5240	12.72							13.39		
CH 52	5260	11.92	CH 64	12.21	12.27	12.24	12.25	12.77	12.52	12.79	12.41
CH 60	5300	11.51							12.18		
CH 64	5320	12.28							12.82		

WLAN 5GHz 802.11ac VHT40 Average Power (dBm)												
Power vs. Channel			Power vs. Data Rate									
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 38	5190	12.12	CH 38	12.08	12.13	12.11	12.14	12.72	12.78	12.74	12.53	12.42
CH 46	5230	12.05							12.71			
CH 54	5270	12.91	CH 54	12.82	12.85	12.84	12.79	13.31	13.35	13.33	13.03	12.99
CH 62	5310	12.78							13.26			

WLAN 5GHz 802.11ac VHT80 Average Power (dBm)												
Power vs. Channel			Power vs. Data Rate									
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 42	5210	12.96	CH 42	12.87	12.94	12.92	12.91	13.39	13.43	13.38	13.33	13.29
CH 58	5290	12.78	CH 58	12.72	12.74	12.76	12.58	13.16	13.22	13.18	13.02	12.98

2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Modulation	Data Rate
802.11a	54 Mbps
802.11n HT20	MCS7
802.11n HT40	MCS7
802.11ac VHT20	MCS6
802.11ac VHT40	MCS6
802.11ac VHT80	MCS6

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 1 (Charging from Adapter) + Battery 1 + SIM 1 for Sample 1
	Mode 2 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 2 (Charging from Adapter) + Battery 2 + SIM 2 for Sample 2
Remark: The worst case of conducted emission is mode 1; only the test data of it is reported.	



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

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

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

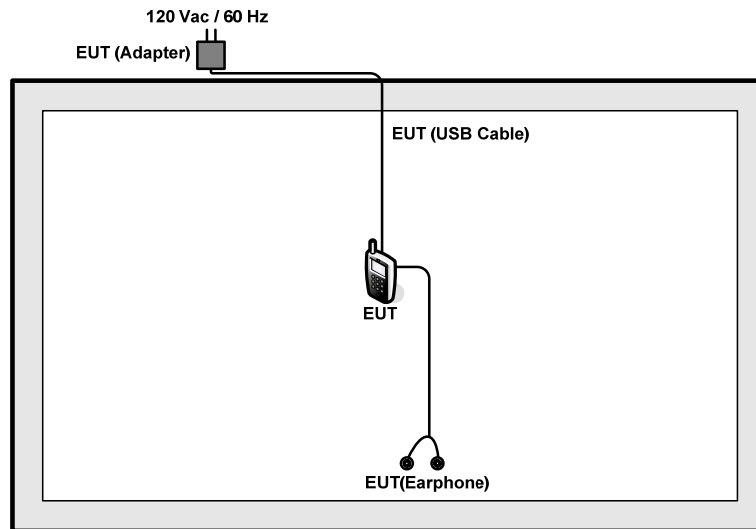
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz
		802.11ac VHT20	802.11ac VHT20
L	Low	36	52
M	Middle	44	60
H	High	48	64

Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz
		802.11ac VHT40	802.11ac VHT40
L	Low	38	54
M	Middle	-	-
H	High	46	62

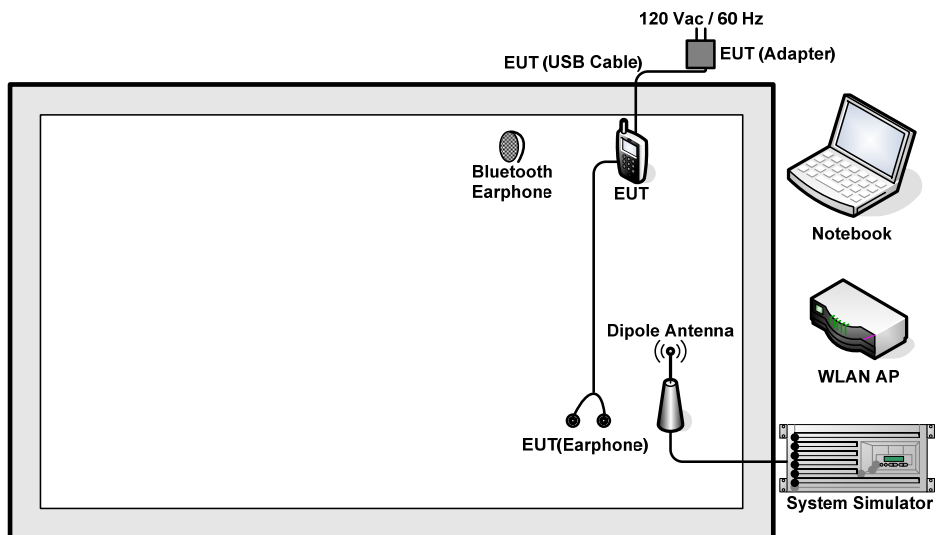
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz
		802.11ac VHT80	802.11ac VHT80
L	Low	-	-
M	Middle	42	58
H	High	-	-

2.4 Connection Diagram of Test System

< Radiated Emission Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-855	KA2IR855A2	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH 308	FCC DoC	N/A	N/A
5.	DC Power Supply	GW INSTEK	GPD-2303S	N/A	N/A	Unshielded, 1.8 m

2.6 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.



2.7 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 7.0 dB.

$$\begin{aligned}\text{Offset (dB)} &= \text{RF cable loss(dB)}. \\ &= 7.0 \text{ (dB)}\end{aligned}$$

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.

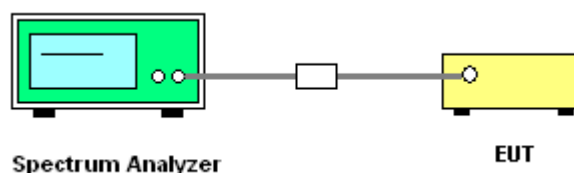
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

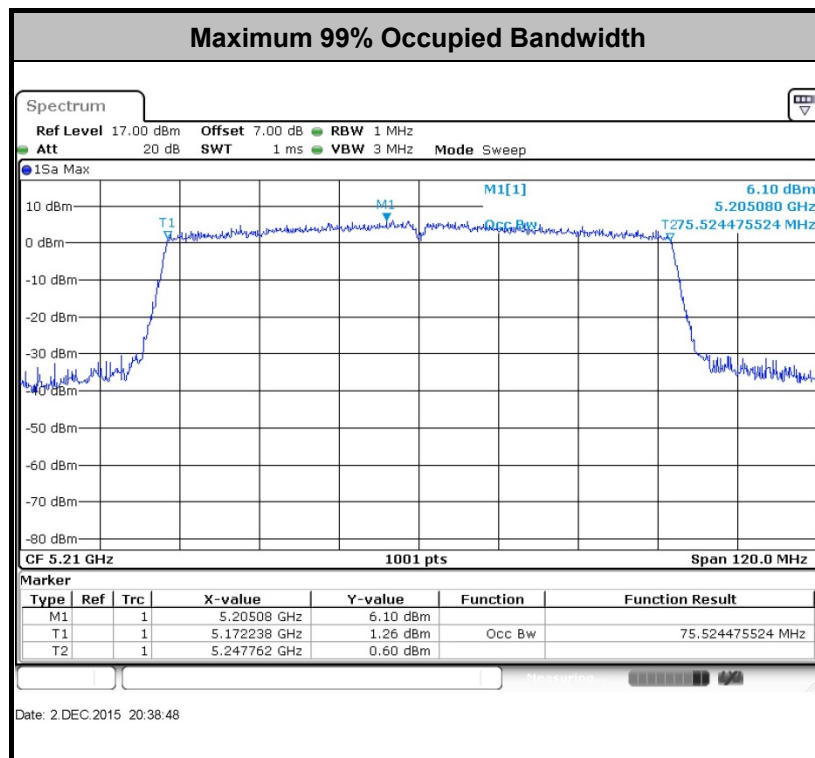
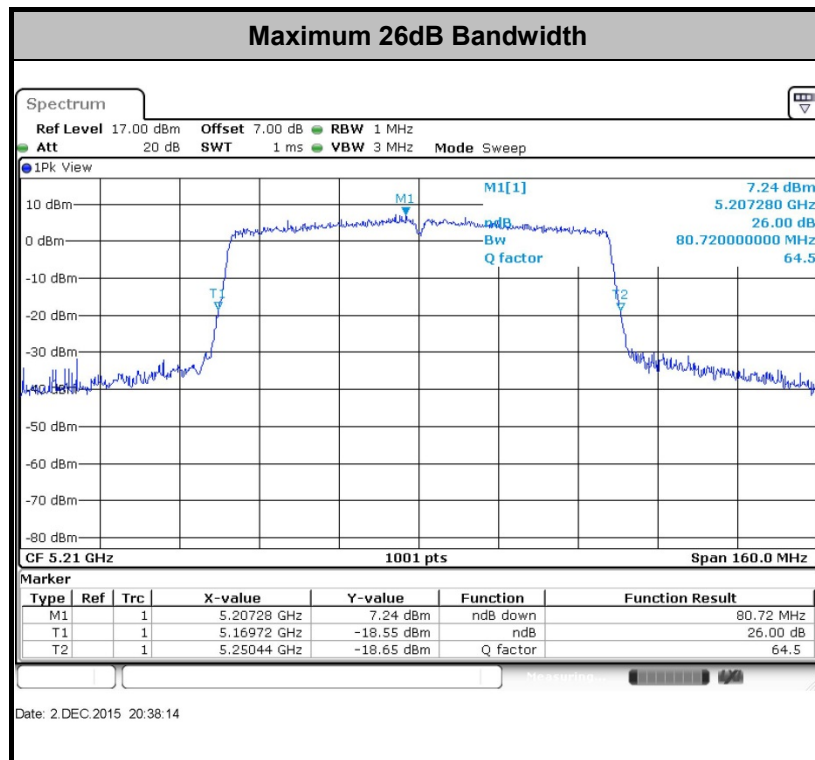
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.
Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down 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) $\geq 3 * \text{RBW}$.
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.



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 5.25–5.35 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, 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.

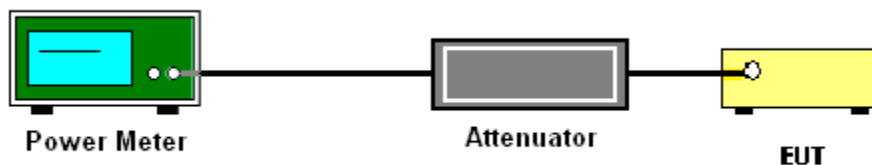
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.

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



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 5.25–5.35 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 v01.

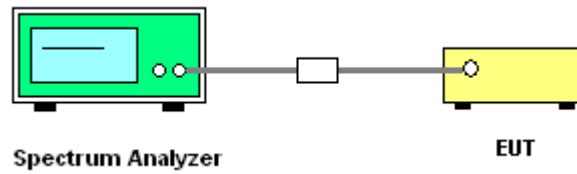
Section F) Maximum power spectral density.

Method SA-2

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

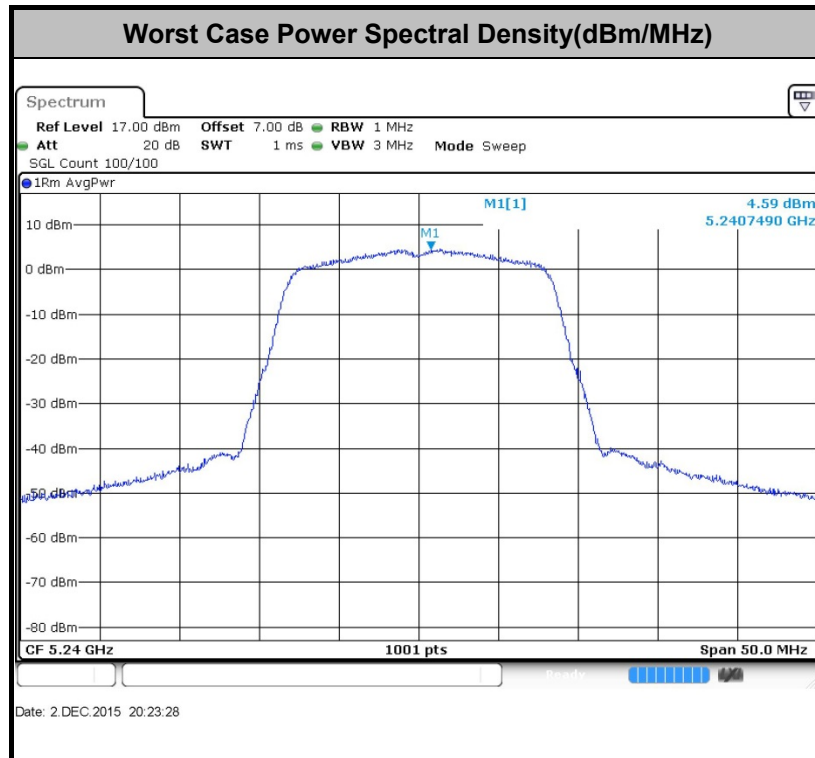
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - Sweep 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.



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 Part 15.205.

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.

- (2) Unwanted spurious emissions fallen in restricted bands per FCC Part 15.205 shall comply with the general field strength limits set forth in § 15.209 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.

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

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

- (3) KDB789033 v01 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 v01.

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 \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

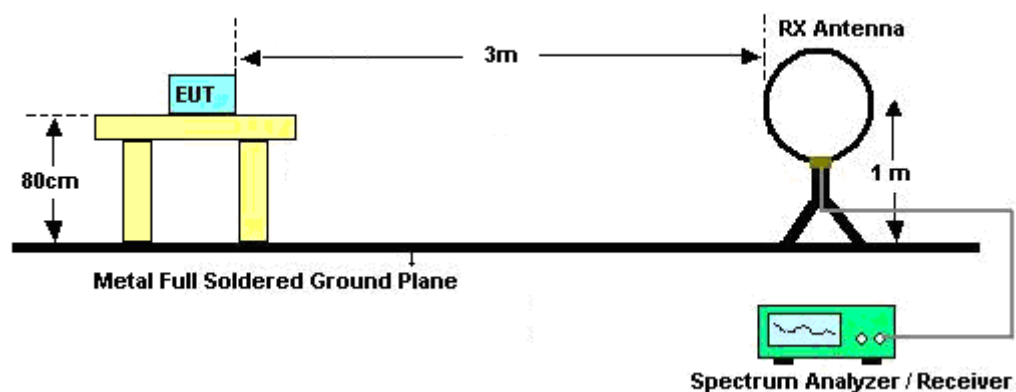
- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW \geq 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	100.00	-	-	10Hz
802.11n HT20	100.00	-	-	10Hz
802.11n HT40	100.00	-	-	10Hz
802.11n VHT20	100.00	-	-	10Hz
802.11n VHT40	100.00	-	-	10Hz
802.11n VHT80	100.00	-	-	10Hz

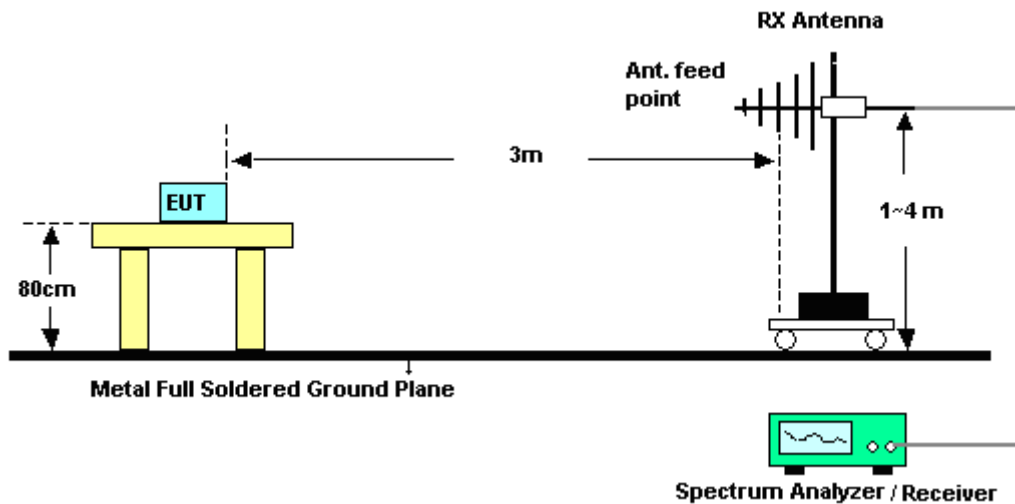
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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

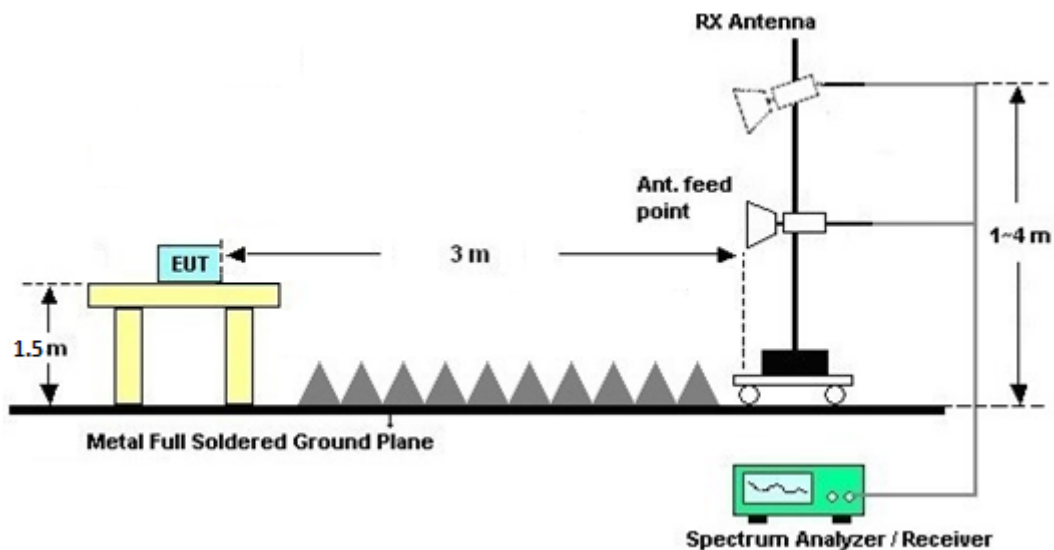
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated 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 per 15.31(o) was not reported.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix B.

3.4.7 Test Result of Unwanted Radiated Emission (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 (dB μ V)	
	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.

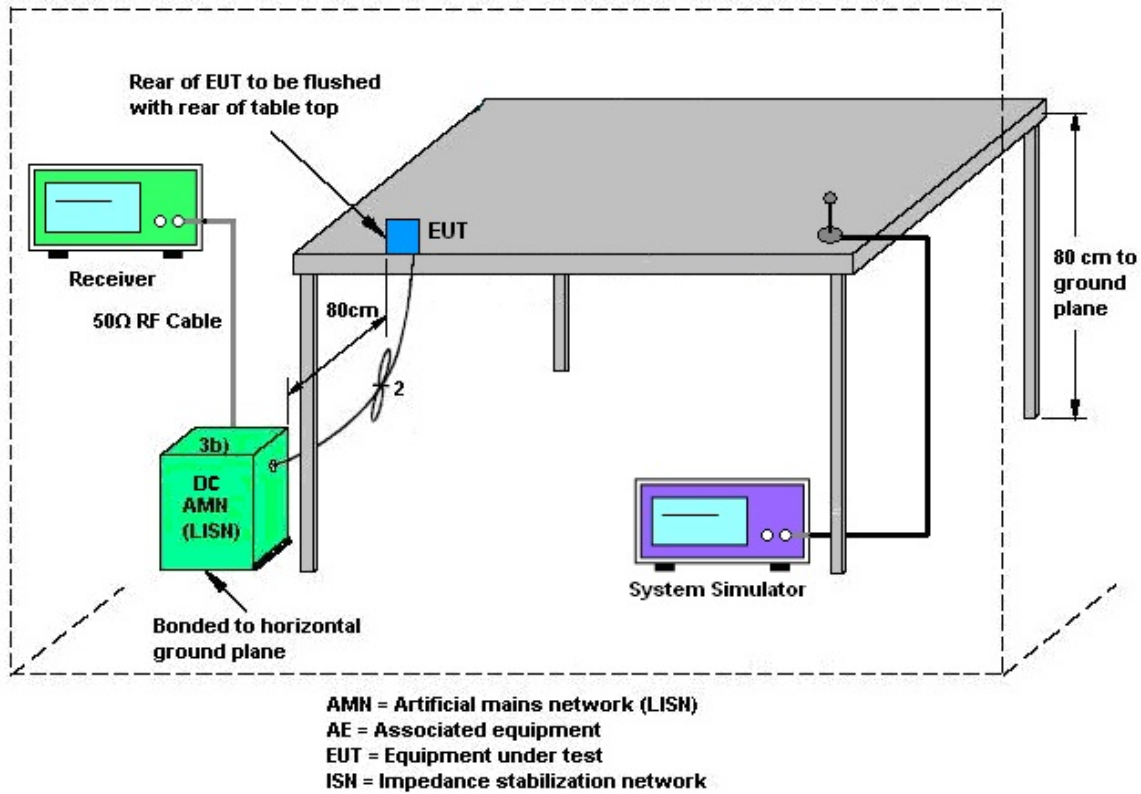
3.5.2 Measuring Instruments

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.

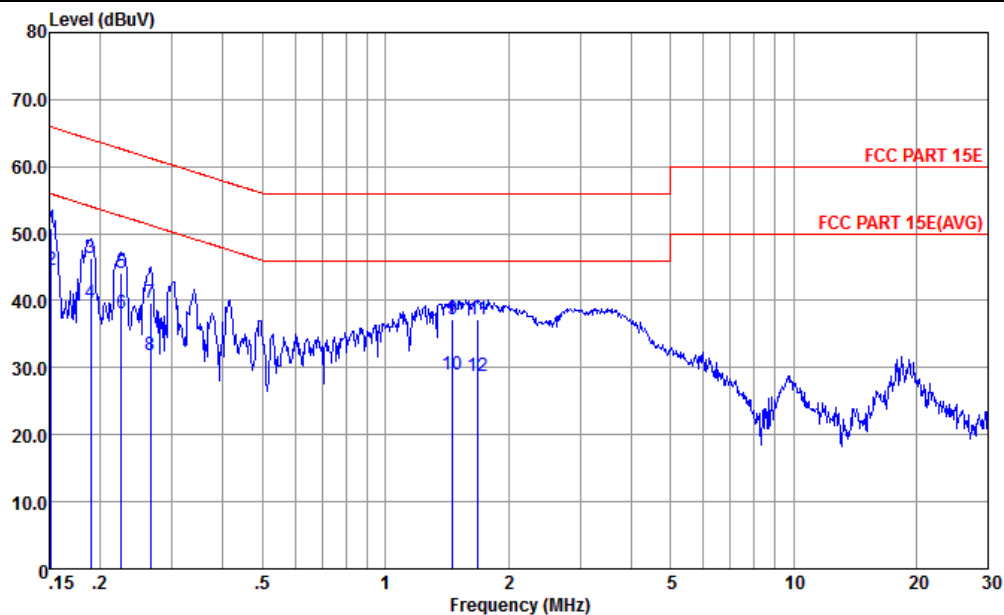
3.5.4 Test Setup





3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	44~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 1 (Charging from Adapter) + Battery 1 + SIM 1 for Sample 1		



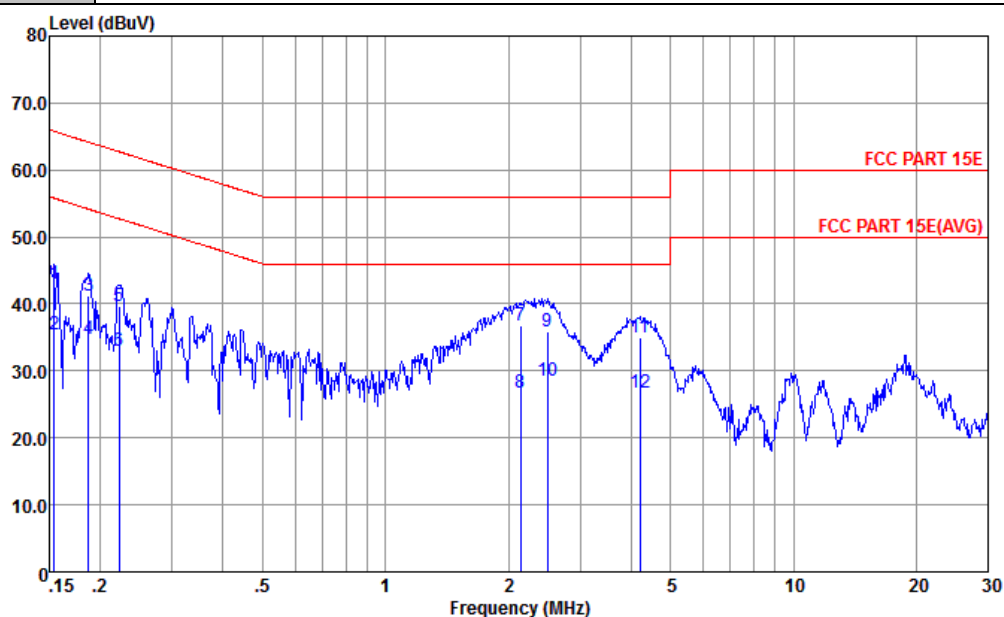
Site : CO01-KS
Condition : FCC PART 15E LISN-L-20151024 LINE

mode : Mode 1
: 867802020035011/867802020035029

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	50.83	-15.08	65.91	40.20	0.52	10.11	QP
2 *	0.15	44.53	-11.38	55.91	33.90	0.52	10.11	Average
3	0.19	46.29	-17.77	64.06	35.90	0.27	10.12	QP
4	0.19	39.69	-14.37	54.06	29.30	0.27	10.12	Average
5	0.23	44.06	-18.55	62.61	33.70	0.22	10.14	QP
6	0.23	38.16	-14.45	52.61	27.80	0.22	10.14	Average
7	0.27	39.67	-21.58	61.25	29.31	0.22	10.14	QP
8	0.27	31.97	-19.28	51.25	21.61	0.22	10.14	Average
9	1.46	37.15	-18.85	56.00	26.80	0.21	10.14	QP
10	1.46	28.95	-17.05	46.00	18.60	0.21	10.14	Average
11	1.69	37.24	-18.76	56.00	26.90	0.20	10.14	QP
12	1.69	28.84	-17.16	46.00	18.50	0.20	10.14	Average



Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	44~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 1 (Charging from Adapter) + Battery 1 + SIM 1 for Sample 1		



Site : CO01-KS
Condition : FCC PART 15E LISN-N-20151024 NEUTRAL

mode : Mode 1
: 867802020035011/867802020035029

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.15	42.91	-22.87	65.78	32.50	0.30	10.11	QP
2	0.15	35.51	-20.27	55.78	25.10	0.30	10.11	Average
3	0.19	41.23	-22.92	64.15	30.80	0.31	10.12	QP
4	0.19	34.73	-19.42	54.15	24.30	0.31	10.12	Average
5	0.22	39.74	-23.00	62.74	29.30	0.31	10.13	QP
6	0.22	33.04	-19.70	52.74	22.60	0.31	10.13	Average
7	2.14	36.82	-19.18	56.00	26.30	0.38	10.14	QP
8	2.14	26.82	-19.18	46.00	16.30	0.38	10.14	Average
9	2.50	35.82	-20.18	56.00	25.29	0.38	10.15	QP
10 *	2.50	28.42	-17.58	46.00	17.89	0.38	10.15	Average
11	4.20	35.03	-20.97	56.00	24.50	0.36	10.17	QP
12	4.20	26.73	-19.27	46.00	16.20	0.36	10.17	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.

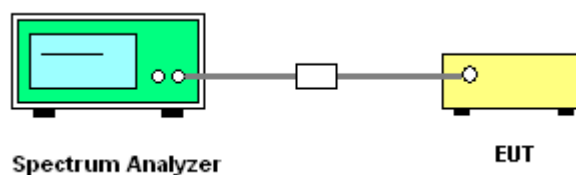
3.6.2 Measuring Instruments

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

According to FCC 47 CFR Section 15.407(a)(1)(2), 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 Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV30	101338	9kHz~30GHz	May 04, 2015	Dec. 02, 2015	May 03, 2016	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz	Jan. 23, 2015	Dec. 02, 2015	Jan. 22, 2016	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 23, 2015	Dec. 02, 2015	Jan. 22, 2016	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 24, 2015	Dec. 02, 2015	Oct. 23, 2016	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Sep. 10, 2015	Dec. 07, 2015	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Jun. 05, 2015	Dec. 07, 2015	Jun. 04, 2016	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 10, 2015	Dec. 07, 2015	Nov. 09, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz-2GHz	Jun. 25, 2015	Dec. 07, 2015	Jun. 24, 2016	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Dec. 07, 2015	Jun. 24, 2016	Radiation (03CH03-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz ~40GHz	Mar. 03, 2015	Dec. 07, 2015	Mar. 02, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz-3000MHz	Aug. 10, 2015	Dec. 07, 2015	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Aug. 27, 2015	Dec. 07, 2015	Aug. 26, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Dec. 07, 2015	Oct. 23, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Dec. 07, 2015	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Dec. 07, 2015	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Dec. 07, 2015	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2015	Nov. 30, 2015	May 03, 2016	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	Nov. 30, 2015	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	Nov. 30, 2015	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	Nov. 30, 2015	Oct. 23, 2016	Conduction (CO01-KS)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
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Appendix A. Conducted Test Results

Report Number : FR5N2306E

Test Engineer:	Issac Song	Temperature:	24~25	°C
Test Date:	2015/12/2	Relative Humidity:	49~51	%

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	54Mbps	1	36	5180	17.23	20.53	-	22.36		
11a	54Mbps	1	44	5220	17.33	20.63	-	22.39		
11a	54Mbps	1	48	5240	17.33	20.73	-	22.39		
HT20	MCS7	1	36	5180	18.18	21.18	-	22.60		
HT20	MCS7	1	44	5220	18.18	21.18	-	22.60		
HT20	MCS7	1	48	5240	18.23	20.93	-	22.61		
HT40	MCS7	1	38	5190	36.16	41.00	-	23.01		
HT40	MCS7	1	46	5230	36.16	41.18	-	23.01		
VHT20	MCS6	1	36	5180	18.18	21.08	-	22.60		
VHT20	MCS6	1	44	5220	18.18	20.98	-	22.60		
VHT20	MCS6	1	48	5240	18.13	21.08	-	22.58		
VHT40	MCS6	1	38	5190	36.06	41.09	-	23.01		
VHT40	MCS6	1	46	5230	36.26	41.09	-	23.01		
VHT80	MCS6	1	42	5210	75.52	80.72	-	23.01		

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	54Mbps	1	36	5180	0.00	14.33	24.00	-2.03		Pass
11a	54Mbps	1	44	5220	0.00	13.59	24.00	-2.03		Pass
11a	54Mbps	1	48	5240	0.00	14.48	24.00	-2.03		Pass
HT20	MCS7	1	36	5180	0.00	13.96	24.00	-2.03		Pass
HT20	MCS7	1	44	5220	0.00	13.29	24.00	-2.03		Pass
HT20	MCS7	1	48	5240	0.00	14.41	24.00	-2.03		Pass
HT40	MCS7	1	38	5190	0.00	13.95	24.00	-2.03		Pass
HT40	MCS7	1	46	5230	0.00	13.69	24.00	-2.03		Pass
VHT20	MCS6	1	36	5180	0.00	13.17	24.00	-2.03		Pass
VHT20	MCS6	1	44	5220	0.00	12.63	24.00	-2.03		Pass
VHT20	MCS6	1	48	5240	0.00	13.39	24.00	-2.03		Pass
VHT40	MCS6	1	38	5190	0.00	12.78	24.00	-2.03		Pass
VHT40	MCS6	1	46	5230	0.00	12.71	24.00	-2.03		Pass
VHT80	MCS6	1	42	5210	0.00	13.43	24.00	-2.03		Pass

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	54Mbps	1	36	5180	0.00	4.30	11.00	-2.03		Pass
11a	54Mbps	1	44	5220	0.00	3.81	11.00	-2.03		Pass
11a	54Mbps	1	48	5240	0.00	4.59	11.00	-2.03		Pass
HT20	MCS7	1	36	5180	0.00	4.45	11.00	-2.03		Pass
HT20	MCS7	1	44	5220	0.00	3.33	11.00	-2.03		Pass
HT20	MCS7	1	48	5240	0.00	4.48	11.00	-2.03		Pass
HT40	MCS7	1	38	5190	0.00	1.14	11.00	-2.03		Pass
HT40	MCS7	1	46	5230	0.00	1.11	11.00	-2.03		Pass
VHT20	MCS6	1	36	5180	0.00	3.31	11.00	-2.03		Pass
VHT20	MCS6	1	44	5220	0.00	2.68	11.00	-2.03		Pass
VHT20	MCS6	1	48	5240	0.00	3.55	11.00	-2.03		Pass
VHT40	MCS6	1	38	5190	0.00	0.27	11.00	-2.03		Pass
VHT40	MCS6	1	46	5230	0.00	-0.07	11.00	-2.03		Pass
VHT80	MCS6	1	42	5210	0.00	-2.28	11.00	-2.03		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	N _{TX}	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	54Mbps	1	52	5260	17.28	20.78	23.38	29.38	23.98	
11a	54Mbps	1	60	5300	17.38	20.68	23.40	29.40	23.98	
11a	54Mbps	1	64	5320	17.28	20.68	23.38	29.38	23.98	
HT20	MCS7	1	52	5260	18.23	21.13	23.61	29.61	23.98	
HT20	MCS7	1	60	5300	18.18	21.18	23.60	29.60	23.98	
HT20	MCS7	1	64	5320	18.23	21.03	23.61	29.61	23.98	
HT40	MCS7	1	54	5270	36.16	41.00	23.98	30.00	23.98	
HT40	MCS7	1	62	5310	36.26	41.09	23.98	30.00	23.98	
VHT20	MCS6	1	52	5260	18.13	20.98	23.58	29.58	23.98	
VHT20	MCS6	1	60	5300	18.18	21.03	23.60	29.60	23.98	
VHT20	MCS6	1	64	5320	18.13	21.13	23.58	29.58	23.98	
VHT40	MCS6	1	54	5270	36.16	41.18	23.98	30.00	23.98	
VHT40	MCS6	1	62	5310	36.46	41.18	23.98	30.00	23.98	
VHT80	MCS6	1	58	5290	75.40	80.56	23.98	30.00	23.98	

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)		Pass/Fail
11a	54Mbps	1	52	5260	0.00	13.81	23.98	-2.08		Pass
11a	54Mbps	1	60	5300	0.00	13.28	23.98	-2.08		Pass
11a	54Mbps	1	64	5320	0.00	14.21	23.98	-2.08		Pass
HT20	MCS7	1	52	5260	0.00	13.54	23.98	-2.08		Pass
HT20	MCS7	1	60	5300	0.00	13.28	23.98	-2.08		Pass
HT20	MCS7	1	64	5320	0.00	13.91	23.98	-2.08		Pass
HT40	MCS7	1	54	5270	0.00	14.14	23.98	-2.08		Pass
HT40	MCS7	1	62	5310	0.00	14.16	23.98	-2.08		Pass
VHT20	MCS6	1	52	5260	0.00	12.52	23.98	-2.08		Pass
VHT20	MCS6	1	60	5300	0.00	12.18	23.98	-2.08		Pass
VHT20	MCS6	1	64	5320	0.00	12.82	23.98	-2.08		Pass
VHT40	MCS6	1	54	5270	0.00	13.35	23.98	-2.08		Pass
VHT40	MCS6	1	62	5310	0.00	13.26	23.98	-2.08		Pass
VHT80	MCS6	1	58	5290	0.00	13.22	23.98	-2.08		Pass

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	54Mbps	1	52	5260	0.00	4.32	11.00	-2.08		Pass
11a	54Mbps	1	60	5300	0.00	3.64	11.00	-2.08		Pass
11a	54Mbps	1	64	5320	0.00	4.21	11.00	-2.08		Pass
HT20	MCS7	1	52	5260	0.00	3.50	11.00	-2.08		Pass
HT20	MCS7	1	60	5300	0.00	3.29	11.00	-2.08		Pass
HT20	MCS7	1	64	5320	0.00	3.61	11.00	-2.08		Pass
HT40	MCS7	1	54	5270	0.00	1.44	11.00	-2.08		Pass
HT40	MCS7	1	62	5310	0.00	1.16	11.00	-2.08		Pass
VHT20	MCS6	1	52	5260	0.00	2.78	11.00	-2.08		Pass
VHT20	MCS6	1	60	5300	0.00	2.17	11.00	-2.08		Pass
VHT20	MCS6	1	64	5320	0.00	2.56	11.00	-2.08		Pass
VHT40	MCS6	1	54	5270	0.00	0.32	11.00	-2.08		Pass
VHT40	MCS6	1	62	5310	0.00	0.05	11.00	-2.08		Pass
VHT80	MCS6	1	58	5290	0.00	-2.94	11.00	-2.08		Pass

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	54Mbps	1	36	5180	5180.025	0.025	4.83	20	3.65	
11a	54Mbps	1	36	5180	5180.025	0.025	4.83	20	4.35	
11a	54Mbps	1	36	5180	5180.025	0.025	4.83	20	3.8	
11a	54Mbps	1	36	5180	5180.025	0.025	4.83	-30	3.8	
11a	54Mbps	1	36	5180	5180.025	0.025	4.83	50	3.8	

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	54Mbps	1	64	5320	5320.025	0.025	4.70	20	3.65	
11a	54Mbps	1	64	5320	5320.025	0.025	4.70	20	4.35	
11a	54Mbps	1	64	5320	5320.025	0.025	4.70	20	3.8	
11a	54Mbps	1	64	5320	5320.025	0.025	4.70	-30	3.8	
11a	54Mbps	1	64	5320	5320.025	0.025	4.70	50	3.8	



Appendix B. Radiated Test Results

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

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)
802.11a CH 36 5180MHz		5147.6	60.35	-13.65	74	56.91	31.84	8.13	36.53	392	298	P	H
		5150	44.84	-9.16	54	41.4	31.84	8.13	36.53	392	298	A	H
	*	5178	106.66	-	-	103.15	31.85	8.17	36.51	392	298	P	H
	*	5180	99.06	-	-	95.55	31.85	8.17	36.51	392	298	A	H
		5149.15	58.37	-15.63	74	54.93	31.84	8.13	36.53	309	106	P	V
		5150	44.05	-9.95	54	40.61	31.84	8.13	36.53	309	106	A	V
	*	5182	104.62	-	-	101.11	31.85	8.17	36.51	309	106	P	V
	*	5182	96.61	-	-	93.1	31.85	8.17	36.51	309	106	A	V
802.11a CH 44 5220MHz	*	5222	107.68	-	-	104.12	31.86	8.2	36.5	100	330	P	H
	*	5218	100.18	-	-	96.62	31.86	8.2	36.5	100	330	A	H
	*	5218	104.04	-	-	100.48	31.86	8.2	36.5	337	110	P	V
	*	5220	96.75	-	-	93.19	31.86	8.2	36.5	337	110	A	V
802.11a CH 48 5240MHz	*	5238	108.67	-	-	105.09	31.87	8.21	36.5	100	309	P	H
	*	5242	100.42	-	-	96.82	31.88	8.22	36.5	100	309	A	H
		5352.45	54.08	-19.92	74	50.38	31.91	8.29	36.5	100	309	P	H
		5350.6	43.59	-10.41	54	39.89	31.91	8.29	36.5	100	309	A	H
	*	5238	103.1	-	-	99.52	31.87	8.21	36.5	302	123	P	V
	*	5242	95.93	-	-	92.33	31.88	8.22	36.5	302	123	A	V
		5359.7	52.88	-21.12	74	49.18	31.91	8.29	36.5	302	123	P	V
		5354.3	42.47	-11.53	54	38.77	31.91	8.29	36.5	302	123	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		8288	55.09	-18.91	74	70.15	36.22	10.5	61.78	100	241	P	H
	!	8288	50.71	-3.29	54	65.77	36.22	10.5	61.78	100	241	A	H
		10362	59.54	-14.46	74	71.03	38.02	11.59	61.1	119	360	P	H
	!	10362	49.81	-4.19	54	61.3	38.02	11.59	61.1	119	360	A	H
		8288	54.6	-19.4	74	69.66	36.22	10.5	61.78	111	168	P	V
	!	8288	51.77	-2.23	54	66.83	36.22	10.5	61.78	111	168	A	V
		10362	61.94	-12.06	74	73.43	38.02	11.59	61.1	100	122	P	V
	!	10362	52.17	-1.83	54	63.66	38.02	11.59	61.1	100	122	A	V
802.11a CH 44 5220MHz		8352	53.13	-20.87	74	68.15	36.37	10.43	61.82	100	61	P	H
	!	8352	49.71	-4.29	54	64.73	36.37	10.43	61.82	100	61	A	H
		10437	57.03	-16.97	74	68.41	38.06	11.63	61.07	100	264	P	H
		10437	46.85	-7.15	54	58.23	38.06	11.63	61.07	100	264	A	H
		8352	52.74	-21.26	74	67.76	36.37	10.43	61.82	150	166	P	V
	!	8352	48.8	-5.2	54	63.82	36.37	10.43	61.82	150	166	A	V
		10437	60.42	-13.58	74	71.8	38.06	11.63	61.07	100	234	P	V
	!	10437	50.61	-3.39	54	61.99	38.06	11.63	61.07	100	234	A	V
802.11a CH 48 5240MHz		8384	53.25	-20.75	74	68.25	36.46	10.39	61.85	100	180	P	H
	!	8384	49.25	-4.75	54	64.25	36.46	10.39	61.85	100	180	A	H
		10479	58.77	-15.23	74	70.05	38.09	11.67	61.04	150	341	P	H
	!	10479	48.41	-5.59	54	59.69	38.09	11.67	61.04	150	341	A	H
		8384	53.93	-20.07	74	68.93	36.46	10.39	61.85	100	250	P	V
	!	8384	50.03	-3.97	54	65.03	36.46	10.39	61.85	100	250	A	V
		10479	59.28	-14.72	74	70.56	38.09	11.67	61.04	100	251	P	V
	!	10479	49.6	-4.4	54	60.88	38.09	11.67	61.04	100	251	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 (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		5149.8	60.66	-13.34	74	57.22	31.84	8.13	36.53	121	313	P	H
		5149.9	44.97	-9.03	54	41.53	31.84	8.13	36.53	121	313	A	H
	*	5180	106.84	-	-	103.33	31.85	8.17	36.51	121	313	P	H
	*	5180	100.36	-	-	96.85	31.85	8.17	36.51	121	313	A	H
		5149.7	56.54	-17.46	74	53.1	31.84	8.13	36.53	304	111	P	V
		5149.7	43.53	-10.47	54	40.09	31.84	8.13	36.53	304	111	A	V
	*	5180	102.72	-	-	99.21	31.85	8.17	36.51	304	111	P	V
	*	5180	96.19	-	-	92.68	31.85	8.17	36.51	304	111	A	V
802.11n HT20 CH 44 5220MHz	*	5220	108.85	-	-	105.29	31.86	8.2	36.5	100	310	P	H
	*	5220	101.35	-	-	97.79	31.86	8.2	36.5	100	310	A	H
	*	5222	104.07	-	-	100.51	31.86	8.2	36.5	300	120	P	V
	*	5220	98.05	-	-	94.49	31.86	8.2	36.5	300	120	A	V
802.11n HT20 CH 48 5240MHz	*	5240	107.87	-	-	104.29	31.87	8.21	36.5	100	325	P	H
	*	5242	100.47	-	-	96.87	31.88	8.22	36.5	100	325	A	H
		5376.25	54.19	-19.81	74	50.47	31.91	8.31	36.5	100	325	P	H
		5351.5	43.89	-10.11	54	40.19	31.91	8.29	36.5	100	325	A	H
	*	5240	102.49	-	-	98.91	31.87	8.21	36.5	100	25	P	V
	*	5242	94.41	-	-	90.81	31.88	8.22	36.5	100	25	A	V
		5366.1	52.61	-21.39	74	48.89	31.91	8.31	36.5	100	25	P	V
		5397.5	42.4	-11.6	54	38.65	31.92	8.33	36.5	100	25	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 5180MHz		8288	55.38	-18.62	74	70.44	36.22	10.5	61.78	100	253	P	H
	!	8288	50.41	-3.59	54	65.47	36.22	10.5	61.78	100	253	A	H
		10356	58.42	-15.58	74	69.94	38.01	11.58	61.11	100	341	P	H
		10356	44.97	-9.03	54	56.49	38.01	11.58	61.11	100	341	A	H
		8288	55.38	-18.62	74	70.44	36.22	10.5	61.78	100	165	P	V
	!	8288	50.68	-3.32	54	65.74	36.22	10.5	61.78	100	165	A	V
		10359	61.61	-12.39	74	73.1	38.02	11.59	61.1	108	242	P	V
		10359	47.61	-6.39	54	59.1	38.02	11.59	61.1	108	242	A	V
802.11n HT20 CH 44 5220MHz		8352	54.78	-19.22	74	69.8	36.37	10.43	61.82	300	268	P	H
	!	8352	49.6	-4.4	54	64.62	36.37	10.43	61.82	100	268	A	H
		10443	57.83	-16.17	74	69.21	38.06	11.63	61.07	100	256	P	H
		10443	46.95	-7.05	54	58.33	38.06	11.63	61.07	100	256	A	H
		8352	52.23	-21.77	74	67.25	36.37	10.43	61.82	100	152	P	V
	!	8352	48.68	-5.32	54	63.7	36.37	10.43	61.82	100	152	A	V
		10443	56.83	-17.17	74	68.21	38.06	11.63	61.07	100	245	P	V
	!	10443	48.86	-5.14	54	60.24	38.06	11.63	61.07	100	245	A	V
802.11n HT20 CH 48 5240MHz		8384	53.08	-20.92	74	68.08	36.46	10.39	61.85	100	270	P	H
	!	8384	48.99	-5.01	54	63.99	36.46	10.39	61.85	100	270	A	H
		10479	56.16	-17.84	74	67.44	38.09	11.67	61.04	100	268	P	H
	!	10479	49.96	-4.04	54	61.24	38.09	11.67	61.04	100	268	A	H
		8384	53.24	-20.76	74	68.24	36.46	10.39	61.85	114	177	P	V
	!	8384	49.21	-4.79	54	64.21	36.46	10.39	61.85	114	177	A	V
		10482	59.97	-14.03	74	71.25	38.09	11.67	61.04	100	127	P	V
	!	10482	50.74	-3.26	54	62.02	38.09	11.67	61.04	100	127	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 (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		5145.95	62.98	-11.02	74	59.54	31.84	8.13	36.53	100	331	P	H
		5149.8	46.62	-7.38	54	43.18	31.84	8.13	36.53	100	331	A	H
	*	5192	104.16	-	-	100.61	31.86	8.19	36.5	100	331	P	H
	*	5188	95.77	-	-	92.26	31.85	8.17	36.51	100	331	A	H
		5141.6	59.16	-14.84	74	55.72	31.84	8.13	36.53	300	124	P	V
		5149.8	45.06	-8.94	54	41.62	31.84	8.13	36.53	300	124	A	V
	*	5188	100.81	-	-	97.3	31.85	8.17	36.51	300	124	P	V
	*	5192	92.75	-	-	89.2	31.86	8.19	36.5	300	124	A	V
802.11n HT40 CH 46 5230MHz	*	5232	104.33	-	-	100.75	31.87	8.21	36.5	100	307	P	H
	*	5232	96.15	-	-	92.57	31.87	8.21	36.5	100	307	A	H
		5351.15	53.17	-20.83	74	49.47	31.91	8.29	36.5	100	307	P	H
		5351.3	43.26	-10.74	54	39.56	31.91	8.29	36.5	100	307	A	H
	*	5232	101.49	-	-	97.91	31.87	8.21	36.5	306	119	P	V
	*	5228	93.55	-	-	89.97	31.87	8.21	36.5	306	119	A	V
		5360.9	52.79	-21.21	74	49.07	31.91	8.31	36.5	306	119	P	V
		5352.3	42.57	-11.43	54	38.87	31.91	8.29	36.5	306	119	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 5190MHz		8304	53.94	-20.06	74	68.98	36.27	10.48	61.79	100	256	P	H
	!	8304	49.1	-4.9	54	64.14	36.27	10.48	61.79	100	256	A	H
		10383	56.79	-17.21	74	68.26	38.03	11.6	61.1	100	258	P	H
		10383	44.82	-9.18	54	56.29	38.03	11.6	61.1	100	258	A	H
		8304	53.68	-20.32	74	68.72	36.27	10.48	61.79	100	268	P	V
	!	8304	50.32	-3.68	54	65.36	36.27	10.48	61.79	100	268	A	V
		10380	57.59	-16.41	74	69.06	38.03	11.6	61.1	100	252	P	V
	!	10380	48.78	-5.22	54	60.25	38.03	11.6	61.1	100	252	A	V
802.11n HT40 CH 46 5230MHz		8368	53.09	-20.91	74	68.11	36.41	10.41	61.84	100	275	P	H
	!	8368	49.56	-4.44	54	64.58	36.41	10.41	61.84	100	275	A	H
		10464	55.53	-18.47	74	66.84	38.08	11.66	61.05	100	65	P	H
		10464	45.94	-8.06	54	57.25	38.08	11.66	61.05	100	65	A	H
		8368	53.88	-20.12	74	68.9	36.41	10.41	61.84	100	173	P	V
	!	8368	50.11	-3.89	54	65.13	36.41	10.41	61.84	100	173	A	V
		10460	57.85	-16.15	74	69.2	38.07	11.64	61.06	100	136	P	V
		10460	47.85	-6.15	54	59.2	38.07	11.64	61.06	100	136	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 VHT20 (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 VHT20 CH 36 5180MHz		5146.1	55.97	-18.03	74	52.53	31.84	8.13	36.53	121	317	P	H
		5108.55	43.95	-10.05	54	40.57	31.83	8.1	36.55	121	317	A	H
	*	5178	103.32	-	-	99.81	31.85	8.17	36.51	121	317	P	H
	*	5182	94.86	-	-	91.35	31.85	8.17	36.51	121	317	A	H
		5141.6	54.34	-19.66	74	50.9	31.84	8.13	36.53	323	121	P	V
		5101.85	43.6	-10.4	54	40.25	31.83	8.08	36.56	323	121	A	V
	*	5180	99.94	-	-	96.43	31.85	8.17	36.51	323	121	P	V
802.11ac VHT20 CH 44 5220MHz	*	5182	91.04	-	-	87.53	31.85	8.17	36.51	323	121	A	V
	*	5222	103.29	-	-	99.73	31.86	8.2	36.5	115	309	P	H
	*	5218	94.4	-	-	90.84	31.86	8.2	36.5	115	309	A	H
	*	5222	100.49	-	-	96.93	31.86	8.2	36.5	299	118	P	V
802.11ac VHT20 CH 48 5240MHz	*	5218	91.04	-	-	87.48	31.86	8.2	36.5	299	118	A	V
	*	5242	104.64	-	-	101.04	31.88	8.22	36.5	100	306	P	H
	*	5242	95.74	-	-	92.14	31.88	8.22	36.5	100	306	A	H
		5351.15	53.81	-20.19	74	50.11	31.91	8.29	36.5	100	306	P	H
		5352.65	43.24	-10.76	54	39.54	31.91	8.29	36.5	100	306	A	H
	*	5242	100.62	-	-	97.02	31.88	8.22	36.5	298	123	P	V
	*	5242	92.12	-	-	88.52	31.88	8.22	36.5	298	123	A	V
		5352.7	52.78	-21.22	74	49.08	31.91	8.29	36.5	298	123	P	V
Remark		5397.75	42.39	-11.61	54	38.64	31.92	8.33	36.5	298	123	A	V
	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (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 VHT20 CH 36 5180MHz		8288	56.41	-17.59	74	71.47	36.22	10.5	61.78	100	280	P	H
		8288	47.79	-6.21	54	62.85	36.22	10.5	61.78	100	280	A	H
		10359	55.62	-18.38	74	67.11	38.02	11.59	61.1	106	280	P	H
		10359	42.24	-11.76	54	53.73	38.02	11.59	61.1	106	280	A	H
		8288	56.1	-17.9	74	71.16	36.22	10.5	61.78	113	179	P	V
		8288	47.27	-6.73	54	62.33	36.22	10.5	61.78	113	179	A	V
		10356	59.23	-14.77	74	70.75	38.01	11.58	61.11	107	237	P	V
		10356	43.63	-10.37	54	55.15	38.01	11.58	61.11	107	237	A	V
802.11ac VHT20 CH 44 5220MHz		8352	55.37	-18.63	74	70.39	36.37	10.43	61.82	109	278	P	H
		8352	46.42	-7.58	54	61.44	36.37	10.43	61.82	109	278	A	H
		10437	53.3	-20.7	74	64.68	38.06	11.63	61.07	100	342	P	H
		10437	40.84	-13.16	54	52.22	38.06	11.63	61.07	100	342	A	H
		8352	54.86	-19.14	74	69.88	36.37	10.43	61.82	112	167	P	V
		8352	45.86	-8.14	54	60.88	36.37	10.43	61.82	112	167	A	V
		10440	57.47	-16.53	74	68.85	38.06	11.63	61.07	100	132	P	V
		10440	42.76	-11.24	54	54.14	38.06	11.63	61.07	100	132	A	V
802.11ac VHT20 CH 48 5240MHz		8384	55.72	-18.28	74	70.72	36.46	10.39	61.85	103	258	P	H
		8384	46.93	-7.07	54	61.93	36.46	10.39	61.85	103	258	A	H
		10479	55.87	-18.13	74	67.15	38.09	11.67	61.04	104	345	P	H
		10479	41.53	-12.47	54	52.81	38.09	11.67	61.04	104	345	A	H
		8384	55.37	-18.63	74	70.37	36.46	10.39	61.85	102	158	P	V
		8384	46.06	-7.94	54	61.06	36.46	10.39	61.85	102	158	A	V
		10476	58.57	-15.43	74	69.88	38.08	11.66	61.05	100	131	P	V
		10476	42.46	-11.54	54	53.77	38.08	11.66	61.05	100	131	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 VHT40 (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 VHT40 CH 38 5190MHz		5149.4	60.51	-13.49	74	57.07	31.84	8.13	36.53	100	324	P	H
		5149.9	45.95	-8.05	54	42.51	31.84	8.13	36.53	100	324	A	H
	*	5186	104.22	-	-	100.71	31.85	8.17	36.51	100	324	P	H
	*	5188	95.56	-	-	92.05	31.85	8.17	36.51	100	324	A	H
		5140.25	55.11	-18.89	74	51.67	31.84	8.13	36.53	300	127	P	V
		5149.65	44.29	-9.71	54	40.85	31.84	8.13	36.53	300	127	A	V
	*	5188	100.22	-	-	96.71	31.85	8.17	36.51	300	127	P	V
	*	5188	91.36	-	-	87.85	31.85	8.17	36.51	300	127	A	V
802.11ac VHT40 CH 46 5230MHz	*	5232	103.57	-	-	99.99	31.87	8.21	36.5	111	312	P	H
	*	5228	95.55	-	-	91.97	31.87	8.21	36.5	111	312	A	H
		5355.15	53.09	-20.91	74	49.39	31.91	8.29	36.5	111	312	P	H
		5350.35	43.2	-10.8	54	39.5	31.91	8.29	36.5	111	312	A	H
	*	5234	99.04	-	-	95.46	31.87	8.21	36.5	252	125	P	V
	*	5228	91.34	-	-	87.76	31.87	8.21	36.5	252	125	A	V
		5351.85	53.27	-20.73	74	49.57	31.91	8.29	36.5	252	125	P	V
		5400	42.4	-11.6	54	38.65	31.92	8.33	36.5	252	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 VHT40 (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 VHT40 CH 38 5190MHz		8304	54.34	-19.66	74	69.38	36.27	10.48	61.79	100	255	P	H
	!	8304	50.35	-3.65	54	65.39	36.27	10.48	61.79	100	255	A	H
		10380	55.1	-18.9	74	66.57	38.03	11.6	61.1	100	0	P	H
		10380	45.52	-8.48	54	56.99	38.03	11.6	61.1	100	0	A	H
		8304	52.21	-21.79	74	67.25	36.27	10.48	61.79	100	0	P	V
		8304	45.75	-8.25	54	60.79	36.27	10.48	61.79	100	0	A	V
		10380	57.25	-16.75	74	68.72	38.03	11.6	61.1	100	129	P	V
		10380	47.73	-6.27	54	59.2	38.03	11.6	61.1	100	129	A	V
802.11ac VHT40 CH 46 5230MHz		8368	52.77	-21.23	74	67.79	36.41	10.41	61.84	100	295	P	H
	!	8368	48.84	-5.16	54	63.86	36.41	10.41	61.84	100	295	A	H
		10460	53.45	-20.55	74	64.8	38.07	11.64	61.06	100	2	P	H
		10460	43.43	-10.57	54	54.78	38.07	11.64	61.06	100	2	A	H
		8368	54.6	-19.4	74	69.62	36.41	10.41	61.84	100	175	P	V
	!	8368	50.65	-3.35	54	65.67	36.41	10.41	61.84	100	175	A	V
		10460	55.17	-18.83	74	66.52	38.07	11.64	61.06	100	239	P	V
		10460	45.91	-8.09	54	57.26	38.07	11.64	61.06	100	239	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 (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	*	5212	100.02	-	-	96.46	31.86	8.2	36.5	115	343	P	H
	*	5212	92.49	-	-	88.93	31.86	8.2	36.5	115	343	A	H
		5145.95	62.51	-11.49	74	59.07	31.84	8.13	36.53	115	343	P	H
		5149.85	47.1	-6.9	54	43.66	31.84	8.13	36.53	115	343	A	H
		5353.95	50.83	-23.17	74	47.13	31.91	8.29	36.5	115	343	P	H
		5350.5	39.62	-14.38	54	35.92	31.91	8.29	36.5	115	343	A	H
	*	5216	96.52	-	-	92.96	31.86	8.2	36.5	294	121	P	V
	*	5208	88.71	-	-	85.15	31.86	8.2	36.5	294	121	A	V
		5141.65	59.35	-14.65	74	55.91	31.84	8.13	36.53	294	121	P	V
		5149.85	44.45	-9.55	54	41.01	31.84	8.13	36.53	294	121	A	V
		5386.45	47.41	-26.59	74	43.67	31.92	8.32	36.5	294	121	P	V
		5350.15	37.63	-16.37	54	33.93	31.91	8.29	36.5	294	121	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 5210MHz		8336	52.56	-21.44	74	67.58	36.37	10.43	61.82	100	55	P	H
		8336	46.23	-7.77	54	61.25	36.37	10.43	61.82	100	55	A	H
		10420	53.17	-20.83	74	64.58	38.05	11.62	61.08	100	25	P	H
		10420	43.58	-10.42	54	54.99	38.05	11.62	61.08	100	25	A	H
		8336	52.54	-21.46	74	67.56	36.37	10.43	61.82	100	156	P	V
	!	8336	48.92	-5.08	54	63.94	36.37	10.43	61.82	100	156	A	V
		10419	53.58	-20.42	74	64.99	38.05	11.62	61.08	100	166	P	V
		10419	43.44	-10.56	54	54.85	38.05	11.62	61.08	100	166	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 (Band Edge @ 3m)

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)
802.11a CH 52 5260MHz		5112.2	54.1	-19.9	74	50.72	31.83	8.1	36.55	100	319	P	H
		5147.75	43.83	-10.17	54	40.39	31.84	8.13	36.53	100	319	A	H
	*	5258	106.7	-	-	103.1	31.88	8.22	36.5	100	319	P	H
	*	5258	98.88	-	-	95.28	31.88	8.22	36.5	100	319	A	H
		5111.45	54.3	-19.7	74	50.92	31.83	8.1	36.55	332	113	P	V
		5103.65	43.37	-10.63	54	40.02	31.83	8.08	36.56	332	113	A	V
	*	5260	103.3	-	-	99.69	31.88	8.23	36.5	332	113	P	V
	*	5258	95.86	-	-	92.26	31.88	8.22	36.5	332	113	A	V
802.11a CH 60 5300MHz	*	5302	109.04	-	-	105.39	31.89	8.26	36.5	100	315	P	H
	*	5300	101.37	-	-	97.72	31.89	8.26	36.5	100	315	A	H
	*	5300	105.39	-	-	101.74	31.89	8.26	36.5	324	126	P	V
	*	5302	96.75	-	-	93.1	31.89	8.26	36.5	324	126	A	V
802.11a CH 64 5320MHz	*	5320	106.37	-	-	102.7	31.9	8.27	36.5	100	317	P	H
	*	5318	98.79	-	-	95.12	31.9	8.27	36.5	100	317	A	H
		5352.6	61.87	-12.13	74	58.17	31.91	8.29	36.5	100	317	P	H
		5350	45.25	-8.75	54	41.55	31.91	8.29	36.5	100	317	A	H
	*	5322	104.59	-	-	100.92	31.9	8.27	36.5	300	57	P	V
	*	5320	96.84	-	-	93.17	31.9	8.27	36.5	300	57	A	V
		5350.55	59.63	-14.37	74	55.93	31.91	8.29	36.5	300	57	P	V
		5350	44.13	-9.87	54	40.43	31.91	8.29	36.5	300	57	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		8416	53.95	-20.05	74	68.87	36.56	10.36	61.84	100	260	P	H
	!	8416	48.69	-5.31	54	63.61	36.56	10.36	61.84	100	260	A	H
		10521	55.88	-18.12	74	67.11	38.11	11.69	61.03	100	360	P	H
		10521	45.18	-8.82	54	56.41	38.11	11.69	61.03	100	360	A	H
		8418	52.72	-21.28	74	67.64	36.56	10.36	61.84	100	191	P	V
		8418	47.92	-6.08	54	62.84	36.56	10.36	61.84	100	191	A	V
		10520	57.16	-16.84	74	44.65	38.11	11.69	37.29	100	241	P	V
	!	10520	48.98	-5.02	54	36.47	38.11	11.69	37.29	100	241	A	V
802.11a CH 60 5300MHz		10600	55.52	-18.48	74	66.59	38.16	11.75	60.98	100	265	P	H
		10600	46.19	-7.81	54	57.26	38.16	11.75	60.98	100	265	A	H
		10605	57.87	-16.13	74	68.94	38.16	11.75	60.98	100	78	P	V
	!	10605	48.19	-5.81	54	59.26	38.16	11.75	60.98	100	78	A	V
802.11a CH 64 5320MHz		8512	49.47	-24.53	74	63.97	36.82	10.32	61.64	300	360	P	H
		10638	54.97	-19.03	74	65.99	38.18	11.77	60.97	100	0	P	H
		10638	41.51	-12.49	54	52.53	38.18	11.77	60.97	100	0	A	H
		8512	54.41	-19.59	74	68.91	36.82	10.32	61.64	109	165	P	V
	!	8512	49.14	-4.86	54	63.64	36.82	10.32	61.64	109	165	A	V
		10641	56.77	-17.23	74	67.79	38.18	11.77	60.97	108	132	P	V
		10641	46.71	-7.29	54	57.73	38.18	11.77	60.97	108	132	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 (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		5123.6	54.36	-19.64	74	50.95	31.84	8.11	36.54	101	318	P	H
		5149.55	44.21	-9.79	54	40.77	31.84	8.13	36.53	101	318	A	H
	*	5262	107.67	-	-	104.06	31.88	8.23	36.5	101	318	P	H
	*	5258	100.12	-	-	96.52	31.88	8.22	36.5	101	318	A	H
		5114.85	54.25	-19.75	74	50.87	31.83	8.1	36.55	400	31	P	V
		5103.4	43.38	-10.62	54	40.03	31.83	8.08	36.56	400	31	A	V
	*	5260	103.97	-	-	100.36	31.88	8.23	36.5	400	31	P	V
	*	5262	95.33	-	-	91.72	31.88	8.23	36.5	400	31	A	V
802.11n HT20 CH 60 5300MHz	*	5302	105.65	-	-	102	31.89	8.26	36.5	100	37	P	H
	*	5302	98.05	-	-	94.4	31.89	8.26	36.5	100	37	A	H
	*	5302	103.38	-	-	99.73	31.89	8.26	36.5	100	27	P	V
	*	5302	92.06	-	-	88.41	31.89	8.26	36.5	100	27	A	V
802.11n HT20 CH 64 5320MHz	*	5320	104.21	-	-	100.54	31.9	8.27	36.5	100	33	P	H
	*	5322	96.63	-	-	92.96	31.9	8.27	36.5	100	33	A	H
		5351.2	58.89	-15.11	74	55.19	31.91	8.29	36.5	100	33	P	H
		5350.25	44.03	-9.97	54	40.33	31.91	8.29	36.5	100	33	A	H
	*	5320	102.88	-	-	99.21	31.9	8.27	36.5	100	28	P	V
	*	5322	94.12	-	-	90.45	31.9	8.27	36.5	100	28	A	V
		5351.1	57.46	-16.54	74	53.76	31.91	8.29	36.5	100	28	P	V
		5350	43.24	-10.76	54	39.54	31.91	8.29	36.5	100	28	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 5260MHz		8416	54.1	-19.9	74	69.02	36.56	10.36	61.84	100	260	P	H
	!	8416	49.51	-4.49	54	64.43	36.56	10.36	61.84	100	260	A	H
		10521	53.47	-20.53	74	64.7	38.11	11.69	61.03	100	97	P	H
		10521	47.01	-6.99	54	58.24	38.11	11.69	61.03	100	97	A	H
		8416	51.91	-22.09	74	66.83	36.56	10.36	61.84	150	180	P	V
		8416	47.97	-6.03	54	62.89	36.56	10.36	61.84	100	195	A	V
		10518	56.88	-17.12	74	68.11	38.11	11.69	61.03	100	244	P	V
		10518	45.97	-8.03	54	57.2	38.11	11.69	61.03	100	244	A	V
802.11n HT20 CH 60 5300MHz		8480	54.4	-19.6	74	69.03	36.75	10.33	61.71	100	235	P	H
	!	8480	48.93	-5.07	54	63.56	36.75	10.33	61.71	100	235	A	H
		10599	54.54	-19.46	74	65.61	38.16	11.75	60.98	106	231	P	H
		10599	44.67	-9.33	54	55.74	38.16	11.75	60.98	106	355	A	H
		8480	53.4	-20.6	74	68.03	36.75	10.33	61.71	100	183	P	V
		8480	47.83	-6.17	54	62.46	36.75	10.33	61.71	100	183	A	V
		10599	57.14	-16.86	74	68.21	38.16	11.75	60.98	100	360	P	V
		10599	46.43	-7.57	54	57.5	38.16	11.75	60.98	106	219	A	V
802.11n HT20 CH 64 5320MHz		8512	51.98	-22.02	74	66.48	36.82	10.32	61.64	100	183	P	H
		8512	46.79	-7.21	54	61.29	36.82	10.32	61.64	100	183	A	H
		10644	54.44	-19.56	74	65.46	38.18	11.77	60.97	100	168	P	H
		10644	45.23	-8.77	54	56.25	38.18	11.77	60.97	100	168	A	H
		8512	51.31	-22.69	74	65.81	36.82	10.32	61.64	100	120	P	V
		8512	41.03	-12.97	54	55.53	36.82	10.32	61.64	100	120	A	V
		10641	57.11	-16.89	74	68.13	38.18	11.77	60.97	100	122	P	V
		10641	47.23	-6.77	54	58.25	38.18	11.77	60.97	100	122	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 (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		5135.35	54.32	-19.68	74	50.91	31.84	8.11	36.54	100	343	P	H
		5103.9	43.74	-10.26	54	40.39	31.83	8.08	36.56	100	343	A	H
	*	5272	105.4	-	-	101.79	31.88	8.23	36.5	100	343	P	H
	*	5268	97.02	-	-	93.41	31.88	8.23	36.5	100	343	A	H
		5104.15	53.97	-20.03	74	50.62	31.83	8.08	36.56	352	120	P	V
		5104.75	43.47	-10.53	54	40.12	31.83	8.08	36.56	352	120	A	V
	*	5274	102.66	-	-	99.05	31.88	8.23	36.5	352	120	P	V
	*	5272	93.99	-	-	90.38	31.88	8.23	36.5	352	120	A	V
802.11n HT40 CH 62 5310MHz	*	5304	104.3	-	-	100.65	31.89	8.26	36.5	100	307	P	H
	*	5308	96.98	-	-	93.33	31.89	8.26	36.5	100	307	A	H
		5351.2	67.81	-6.19	74	64.11	31.91	8.29	36.5	100	307	P	H
	!	5350	48.48	-5.52	54	44.78	31.91	8.29	36.5	100	307	A	H
	*	5312	100.1	-	-	96.43	31.9	8.27	36.5	300	110	P	V
	*	5312	92.39	-	-	88.72	31.9	8.27	36.5	300	110	A	V
		5350.9	63.77	-10.23	74	60.07	31.91	8.29	36.5	300	110	P	V
		5350	45.5	-8.5	54	41.8	31.91	8.29	36.5	300	110	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 5270MHz		8432	53.71	-20.29	74	68.56	36.61	10.35	61.81	100	268	P	H
	!	8432	49.74	-4.26	54	64.59	36.61	10.35	61.81	100	268	A	H
		10539	53.32	-20.68	74	64.52	38.12	11.7	61.02	100	360	P	H
		10539	43.42	-10.58	54	54.62	38.12	11.7	61.02	100	360	A	H
		8432	52.48	-21.52	74	67.33	36.61	10.35	61.81	100	168	P	V
		8432	47.48	-6.52	54	62.33	36.61	10.35	61.81	100	168	A	V
		10540	55.3	-18.7	74	66.5	38.12	11.7	61.02	100	261	P	V
		10540	46.66	-7.34	54	57.86	38.12	11.7	61.02	100	261	A	V
802.11n HT40 CH 62 5310MHz		10620	54.17	-19.83	74	65.22	38.17	11.76	60.98	100	258	P	H
		10620	43.22	-10.78	54	54.27	38.17	11.76	60.98	100	258	A	H
		10620	54.76	-19.24	74	65.81	38.17	11.76	60.98	100	239	P	V
		10620	45.22	-8.78	54	56.27	38.17	11.76	60.98	100	239	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 VHT20 (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 VHT20 CH 52 5260MHz		5109.5	53.76	-20.24	74	50.38	31.83	8.1	36.55	100	310	P	H
		5100.5	43.41	-10.59	54	40.06	31.83	8.08	36.56	100	310	A	H
	*	5262	103.46	-	-	99.85	31.88	8.23	36.5	100	310	P	H
	*	5258	94.52	-	-	90.92	31.88	8.22	36.5	100	310	A	H
		5111.4	53.65	-20.35	74	50.27	31.83	8.1	36.55	327	124	P	V
		5103.95	43.35	-10.65	54	40	31.83	8.08	36.56	327	124	A	V
	*	5260	99.87	-	-	96.26	31.88	8.23	36.5	327	124	P	V
	*	5258	90.37	-	-	86.77	31.88	8.22	36.5	327	124	A	V
802.11ac VHT20 CH 60 5300MHz	*	5302	106.38	-	-	102.73	31.89	8.26	36.5	100	330	P	H
	*	5298	98.62	-	-	94.97	31.89	8.26	36.5	100	330	A	H
	*	5300	103.29	-	-	99.64	31.89	8.26	36.5	400	43	P	V
	*	5302	95.75	-	-	92.1	31.89	8.26	36.5	400	43	A	V
802.11ac VHT20 CH 64 5320MHz	*	5318	104.92	-	-	101.25	31.9	8.27	36.5	100	312	P	H
	*	5322	97.53	-	-	93.86	31.9	8.27	36.5	100	312	A	H
		5369.85	54.59	-19.41	74	50.87	31.91	8.31	36.5	100	312	P	H
		5350.1	44.85	-9.15	54	41.15	31.91	8.29	36.5	100	312	A	H
	*	5318	102.86	-	-	99.19	31.9	8.27	36.5	400	24	P	V
	*	5318	95.73	-	-	92.06	31.9	8.27	36.5	400	24	A	V
		5363.75	53.17	-20.83	74	49.45	31.91	8.31	36.5	400	24	P	V
		5350.2	43.31	-10.69	54	39.61	31.91	8.29	36.5	400	24	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 VHT20 (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 VHT20 CH 52 5260MHz		8416	54.88	-19.12	74	69.8	36.56	10.36	61.84	100	261	P	H
		8416	46.07	-7.93	54	60.99	36.56	10.36	61.84	100	261	A	H
		10521	51.9	-22.1	74	63.13	38.11	11.69	61.03	300	0	P	H
		10521	40.09	-13.91	54	51.32	38.11	11.69	61.03	300	0	A	H
		8416	54.93	-19.07	74	69.85	36.56	10.36	61.84	100	164	P	V
		8416	45.16	-8.84	54	60.08	36.56	10.36	61.84	100	164	A	V
		10515	54.22	-19.78	74	65.45	38.11	11.69	61.03	100	127	P	V
		10515	41.39	-12.61	54	52.62	38.11	11.69	61.03	100	127	A	V
802.11ac VHT20 CH 60 5300MHz		8480	52.83	-21.17	74	67.46	36.75	10.33	61.71	100	259	P	H
		8480	47.5	-6.5	54	62.13	36.75	10.33	61.71	100	259	A	H
		10599	54.66	-19.34	74	65.73	38.16	11.75	60.98	100	25	P	H
		10599	44.16	-9.84	54	55.23	38.16	11.75	60.98	100	25	A	H
		8480	53.53	-20.47	74	68.16	36.75	10.33	61.71	100	161	P	V
	!	8480	48.63	-5.37	54	63.26	36.75	10.33	61.71	100	161	A	V
		10602	57.88	-16.12	74	68.95	38.16	11.75	60.98	100	246	P	V
		10602	47.14	-6.86	54	58.21	38.16	11.75	60.98	100	246	A	V
802.11ac VHT20 CH 64 5320MHz		8512	53.88	-20.12	74	68.38	36.82	10.32	61.64	100	254	P	H
	!	8512	49.05	-4.95	54	63.55	36.82	10.32	61.64	100	254	A	H
		10641	54.48	-19.52	74	65.5	38.18	11.77	60.97	100	157	P	H
		10641	46.24	-7.76	54	57.26	38.18	11.77	60.97	100	157	A	H
		8512	52.23	-21.77	74	66.73	36.82	10.32	61.64	100	166	P	V
		8512	47.04	-6.96	54	61.54	36.82	10.32	61.64	100	166	A	V
		10644	55.37	-18.63	74	66.39	38.18	11.77	60.97	100	21	P	V
		10644	47.2	-6.8	54	58.22	38.18	11.77	60.97	100	21	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 VHT40 (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 VHT40 CH 54 5270MHz		5140.1	54.43	-19.57	74	50.99	31.84	8.13	36.53	100	333	P	H
		5142.15	43.83	-10.17	54	40.39	31.84	8.13	36.53	100	333	A	H
	*	5268	104.59	-	-	100.98	31.88	8.23	36.5	100	333	P	H
	*	5272	96.45	-	-	92.84	31.88	8.23	36.5	100	333	A	H
		5114.4	53.95	-20.05	74	50.57	31.83	8.1	36.55	303	118	P	V
		5102.3	43.53	-10.47	54	40.18	31.83	8.08	36.56	303	118	A	V
	*	5268	101.62	-	-	98.01	31.88	8.23	36.5	303	118	P	V
	*	5268	93.4	-	-	89.79	31.88	8.23	36.5	303	118	A	V
802.11ac VHT40 CH 62 5310MHz	*	5308	104.97	-	-	101.32	31.89	8.26	36.5	100	335	P	H
	*	5308	97.43	-	-	93.78	31.89	8.26	36.5	100	335	A	H
		5352.3	61.15	-12.85	74	57.45	31.91	8.29	36.5	100	335	P	H
	!	5350.1	48.11	-5.89	54	44.41	31.91	8.29	36.5	100	335	A	H
	*	5312	99.36	-	-	95.69	31.9	8.27	36.5	300	117	P	V
	*	5312	91.64	-	-	87.97	31.9	8.27	36.5	300	117	A	V
		5354	58.41	-15.59	74	54.71	31.91	8.29	36.5	300	117	P	V
		5350.1	44.23	-9.77	54	40.53	31.91	8.29	36.5	300	117	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 VHT40 (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 VHT40 CH 54 5270MHz		8432	53.36	-20.64	74	68.21	36.61	10.35	61.81	100	254	P	H
	!	8432	48.9	-5.1	54	63.75	36.61	10.35	61.81	100	254	A	H
		10540	53.65	-20.35	74	64.85	38.12	11.7	61.02	100	27	P	H
		10540	42.46	-11.54	54	53.66	38.12	11.7	61.02	100	27	A	H
		8432	53.41	-20.59	74	68.26	36.61	10.35	61.81	100	265	P	V
		8432	47.68	-6.32	54	62.53	36.61	10.35	61.81	100	265	A	V
		10540	54.22	-19.78	74	65.42	38.12	11.7	61.02	100	246	P	V
		10540	46.22	-7.78	54	57.42	38.12	11.7	61.02	100	246	A	V
802.11ac VHT40 CH 62 5310MHz		10620	52.81	-21.19	74	63.86	38.17	11.76	60.98	100	0	P	H
		10620	42.21	-11.79	54	53.26	38.17	11.76	60.98	100	0	A	H
		10620	54.81	-19.19	74	65.86	38.17	11.76	60.98	100	49	P	V
		10620	45.73	-8.27	54	56.78	38.17	11.76	60.98	100	49	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 (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	*	5284	99.48	-	-	95.84	31.89	8.25	36.5	100	8	P	H
	*	5288	91.49	-	-	87.85	31.89	8.25	36.5	100	8	A	H
		5147.55	48.74	-25.26	74	45.3	31.84	8.13	36.53	100	8	P	H
		5149.75	38.6	-15.4	54	35.16	31.84	8.13	36.53	100	8	A	H
		5350.05	61.49	-12.51	74	57.79	31.91	8.29	36.5	100	8	P	H
	!	5350.3	48.08	-5.92	54	44.38	31.91	8.29	36.5	100	8	A	H
	*	5294	98.12	-	-	94.47	31.89	8.26	36.5	310	119	P	V
	*	5288	89.62	-	-	85.98	31.89	8.25	36.5	310	119	A	V
		5145.95	48.46	-25.54	74	45.02	31.84	8.13	36.53	310	119	P	V
		5149.1	38.04	-15.96	54	34.6	31.84	8.13	36.53	310	119	A	V
		5352.9	57.18	-16.82	74	53.48	31.91	8.29	36.5	310	119	P	V
		5350.25	45.7	-8.3	54	42	31.91	8.29	36.5	310	119	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		10581	50.14	-23.86	74	61.24	38.15	11.74	60.99	100	44	P	H
CH 58 5290MHz		10581	50	-24	74	61.1	38.15	11.74	60.99	100	254	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission below 1GHz****WIFI 802.11a (LF @ 3m)**

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)
802.11a LF		36.79	27.16	-12.84	40	40.91	16.42	0.73	30.9	100	251	P	H
		107.58	29.57	-13.93	43.5	45.51	13.21	1.25	30.4	-	-	P	H
		137.81	30.44	-13.06	43.5	45.8	13.62	1.42	30.4	-	-	P	H
		174.6	27.56	-15.94	43.5	44.08	12.28	1.6	30.4	-	-	P	H
		372.41	17.57	-28.43	46	29.5	16.34	2.38	30.65	-	-	P	H
		506.27	19.21	-26.79	46	28.44	18.34	2.82	30.39	-	-	P	H
		48.45	31.25	-8.75	40	50.74	10.47	0.84	30.8	141	58	P	V
		83.22	28.42	-11.58	40	47.97	9.84	1.11	30.5	-	-	P	V
		105.71	28.45	-15.05	43.5	44.43	13.18	1.24	30.4	-	-	P	V
		176.85	25.22	-18.28	43.5	41.84	12.16	1.62	30.4	-	-	P	V
		370.85	16.11	-29.89	46	28.09	16.29	2.37	30.64	-	-	P	V
		463.54	19.11	-26.89	46	29.26	17.64	2.68	30.47	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against 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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		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”.