

# FCC RF Test Report

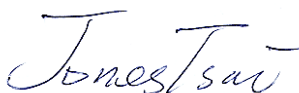
APPLICANT : Jib Wresh LLC  
EQUIPMENT : Tablet PC  
MODEL NAME : SG98EG  
FCC ID : 2ADU6-8274  
STANDARD : FCC Part 15 Subpart E §15.407  
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The testing was completed on Jun. 03, 2015. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL INC.**

No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

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## REVISION HISTORY

[illegible]

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	6dB Bandwidth	> 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm/MHz & 15.209(a)	Pass	Under limit 1.60 dB at 5714.600 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.90 dB at 0.446 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

**Jib Wresh LLC**

1000 Highland Colony Park, Suite 5203

Ridgeland, Mississippi 39157

## 1.2 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Model Name	SG98EG
FCC ID	2ADU6-8274
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v4.1 EDR/LE

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

## 1.3 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	5725 MHz ~ 5850 MHz
Maximum Output Power	802.11a : 16.98 dBm / 0.0499 W 802.11n HT20 : 16.91 dBm / 0.0490 W 802.11n HT40 : 16.72 dBm / 0.0470 W 802.11ac VHT20: 13.99 dBm / 0.0251 W 802.11ac VHT40: 13.69 dBm / 0.0234 W 802.11ac VHT80: 13.60 dBm / 0.0229 W
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type	Fixed Internal Antenna
Antenna Gain	4.64 dBi

## 1.4 Modification of EUT

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

## 1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	TH05-HY	CO05-HY

**Note:** The test site complies with ANSI C63.4 2009 requirement.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Township, Taoyuan County, Taiwan (R.O.C.) TEL: +886-3-327-0855	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	03CH11-HY	

**Note:** The test site complies with ANSI C63.4 2009 requirement.

## 1.6 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 C63.10-2009

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. FCC permits the use of the 1.5 meter table as an alternative in C63.10-2013 through inquiry tracking number 961829.
3. 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 (Y 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 and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	<b>151</b>	<b>5755</b>	<b>159</b>	<b>5795</b>
	153	5765	161	5805
	155	5775	165	5825

**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.

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	16.98	16.72	16.58	16.75	16.67	16.87	16.76	16.84

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	16.91	16.67	16.68	16.77	16.78	16.85	16.84	16.85

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	16.72	16.55	16.53	16.42	16.38	16.33	16.46	16.34

5GHz 802.11ac VHT20 mode									
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8
Average Power (dBm)	13.99	13.78	13.76	13.79	13.97	13.83	13.52	13.64	13.62

5GHz 802.11ac VHT40 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Average Power (dBm)	13.69	13.57	13.46	13.39	13.57	13.37	13.39	13.62	13.36	13.26

5GHz 802.11ac VHT80 mode										
Data Rate (MHz)	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
Average Power (dBm)	13.60	13.49	13.54	13.55	13.55	13.57	13.58	13.50	13.55	13.50

## 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	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

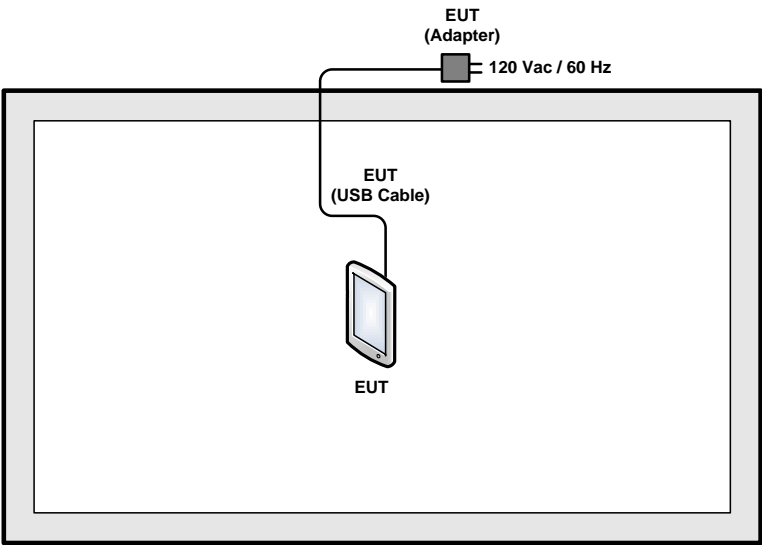
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Link + Earphone + MPEG4 + SD Card + USB Cable (Charging from Adapter)
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Ch. #		Band IV : 5725-5850 MHz		
		802.11a	802.11n HT20	802.11n HT40
L	Low	149	149	151
M	Middle	157	157	-
H	High	165	165	159

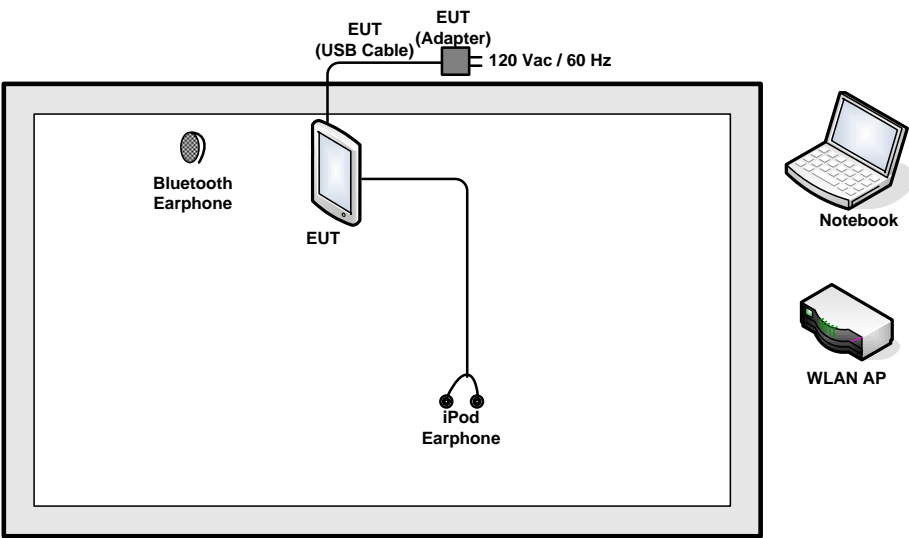
Ch. #		Band IV : 5725-5850 MHz		
		802.11ac VHT20	802.11ac VHT40	802.11ac VHT80
L	Low	149	151	-
M	Middle	157	-	155
H	High	165	159	-

# 2.4 Connection Diagram of Test System

## <WLAN Tx 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.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

## 2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

## 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 and attenuator factor 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 and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

## 3 Test Result

### 3.1 6dB Bandwidth Measurement

#### 3.1.1 Description of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

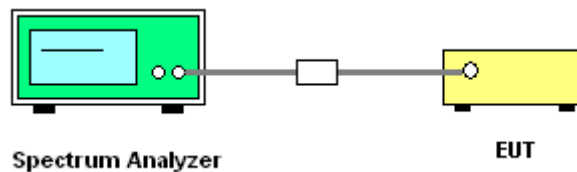
#### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedures

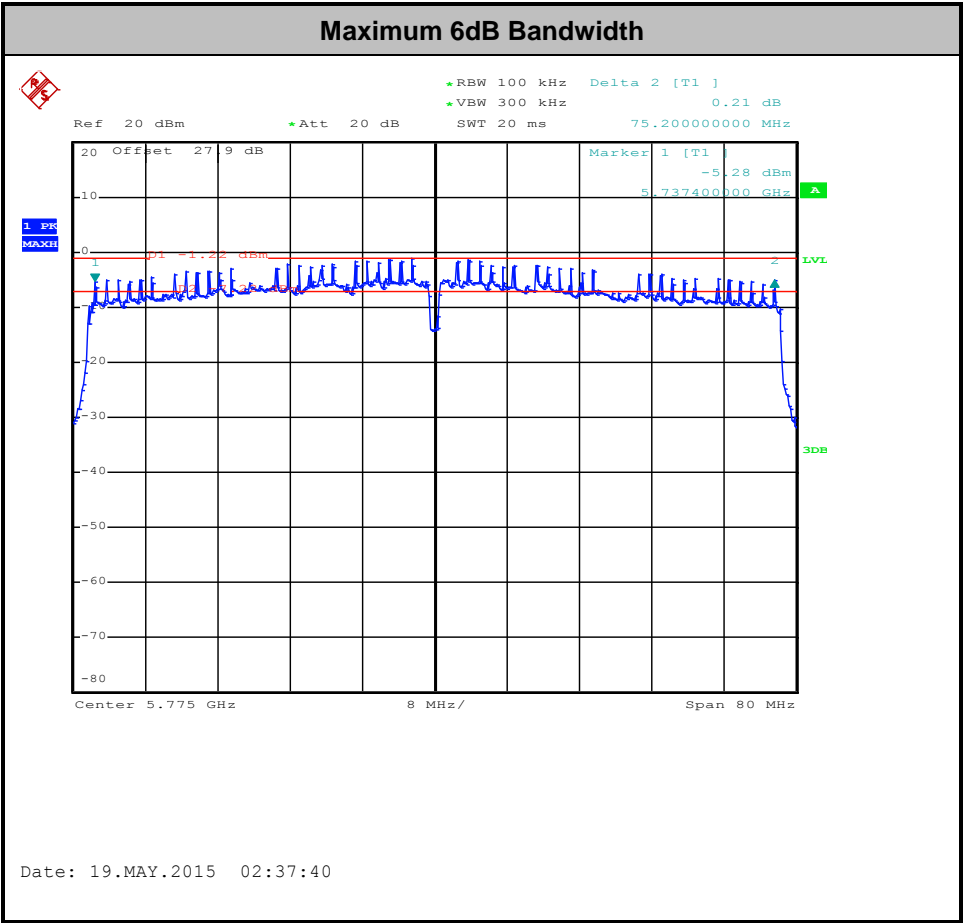
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.  
Section C) Emission bandwidth for the band 5.725-5.85GHz
2. Set RBW = 100kHz.
3. Set the VBW  $\geq 3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

#### 3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

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 the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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.

### 3.2.2 Measuring Instruments

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

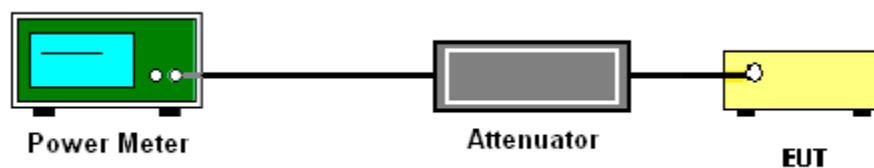
### 3.2.3 Test Procedures

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 the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, 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 #**

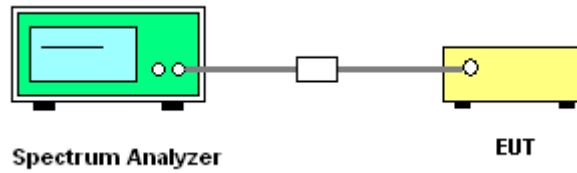
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D01 General UNII Test Procedures v01r03.
  - Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 300 kHz.
  - Set VBW  $\geq$  1 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  $10 \log(500\text{kHz}/\text{RBW})$  to the test result.
  - 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.



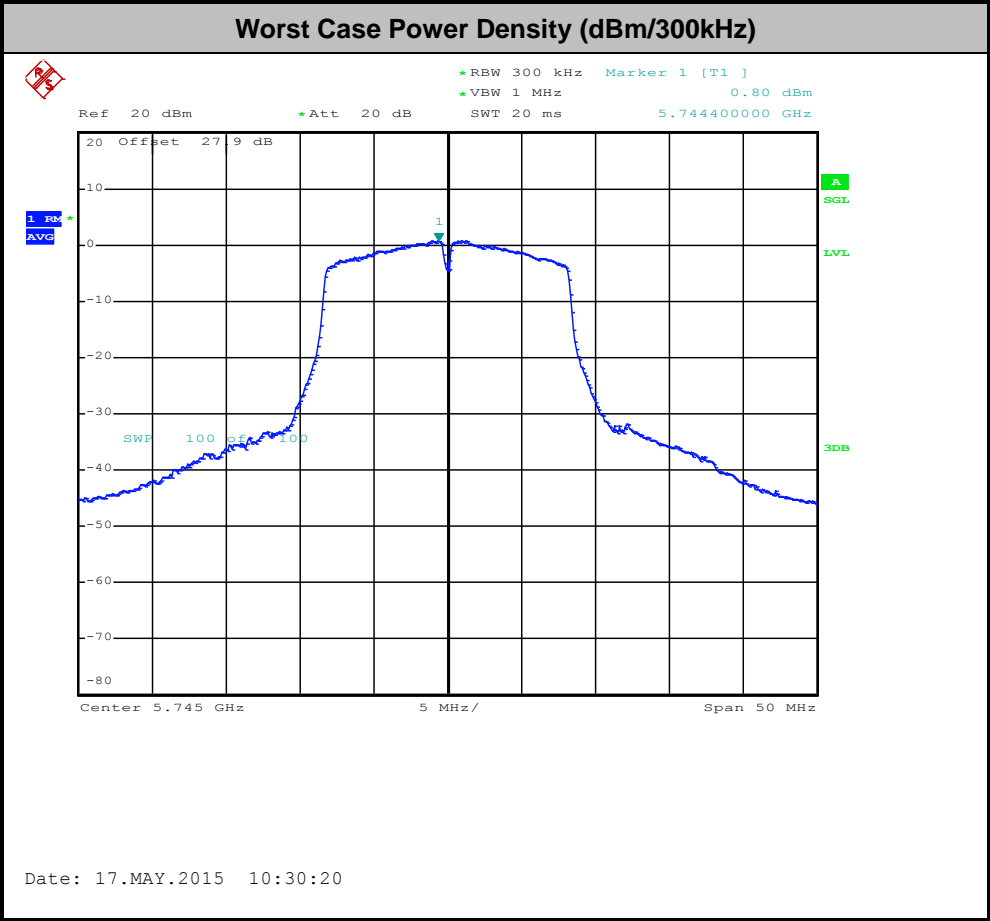
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

### 3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



### 3.4 Unwanted Emissions 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 5725-5850 MHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBμV/m); for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBμV/m).
- (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.

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

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

- (3) KDB789033 v01r03 H)2)c)(i) 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

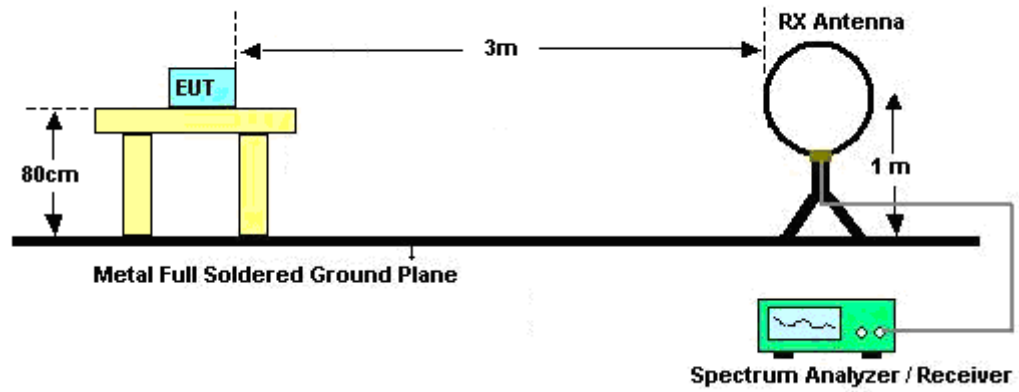
- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW  $\geq$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1	802.11a	92.72	1400	0.71	1kHz
1	5GHz 802.11n HT20	92.20	1300	0.77	1kHz
1	5GHz 802.11n HT40	85.53	650	1.54	3kHz
1	5GHz 802.11ac VHT20	92.25	1310	0.76	1kHz
1	5GHz 802.11ac VHT40	85.53	650	1.54	3kHz
1	5GHz 802.11ac VHT80	76.74	330	3.03	5kHz

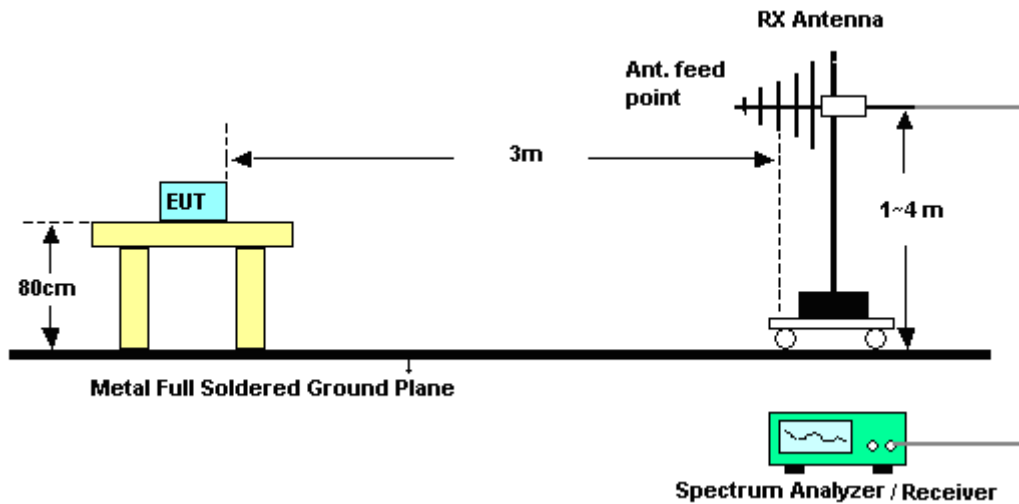
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

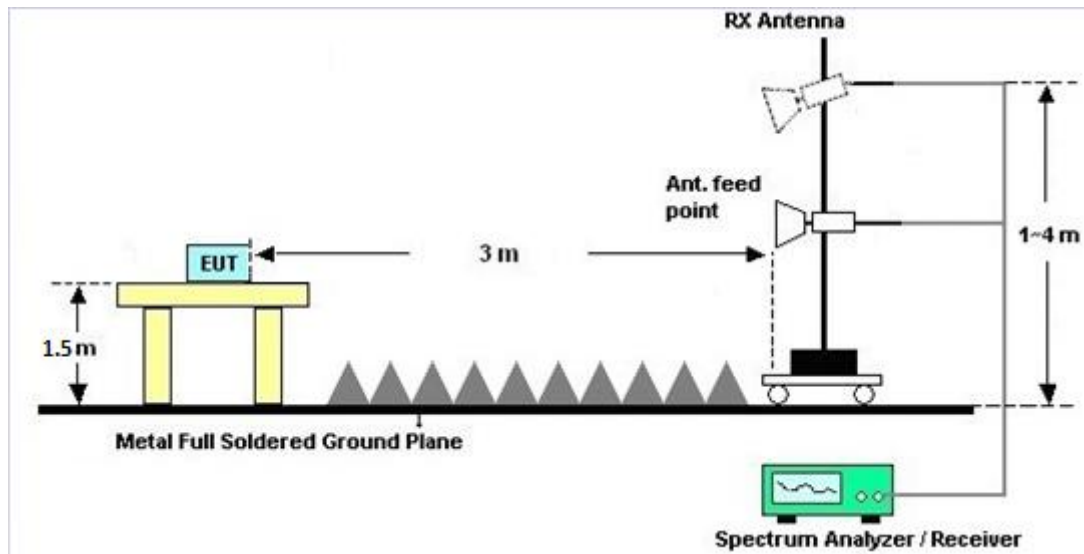
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



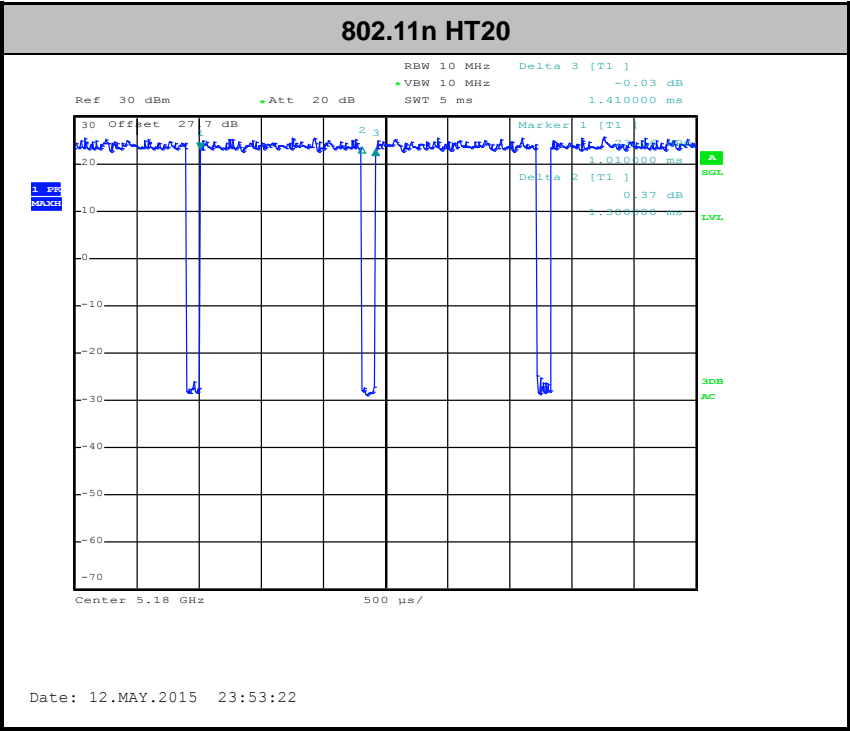
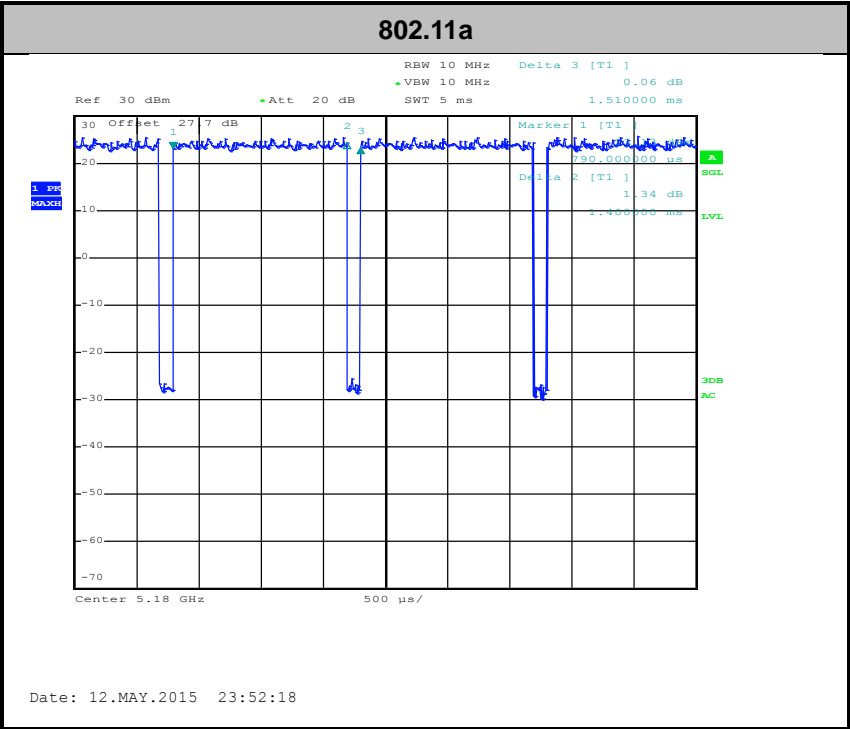
### 3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

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.

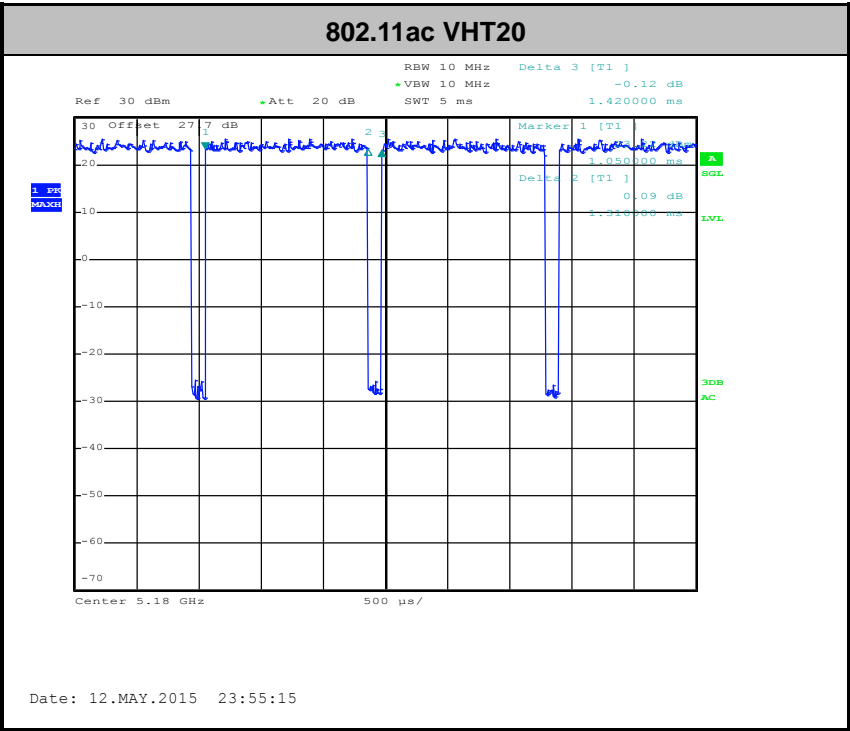
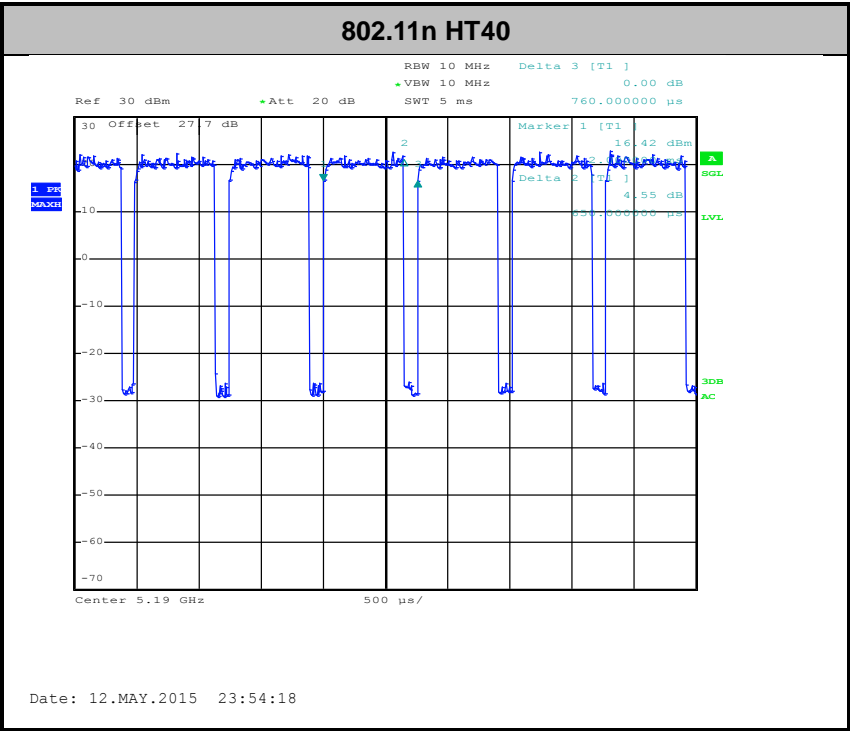
### 3.4.6 Test Result of Radiated Band Edges

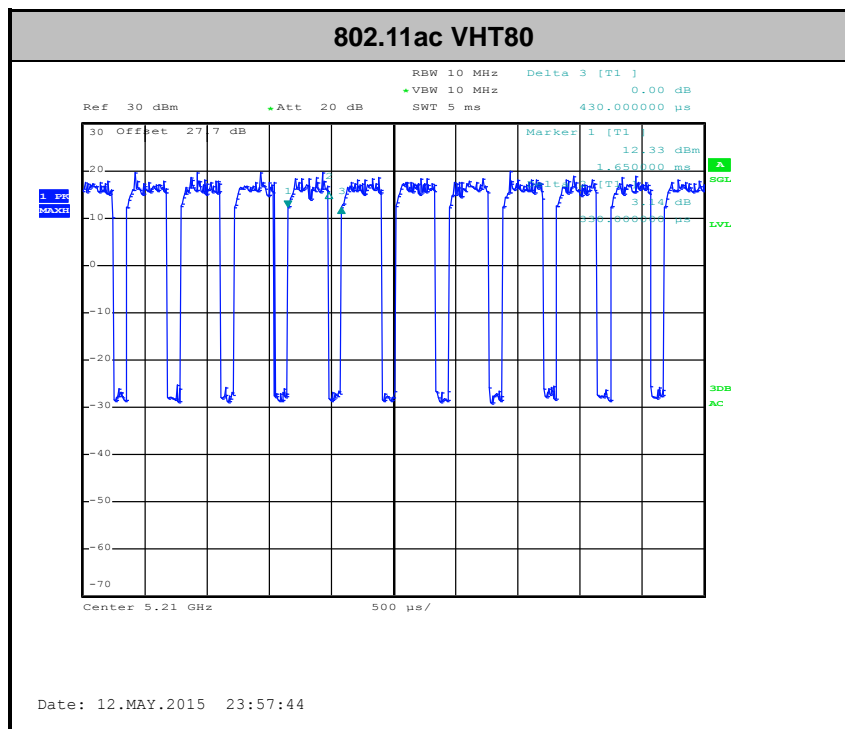
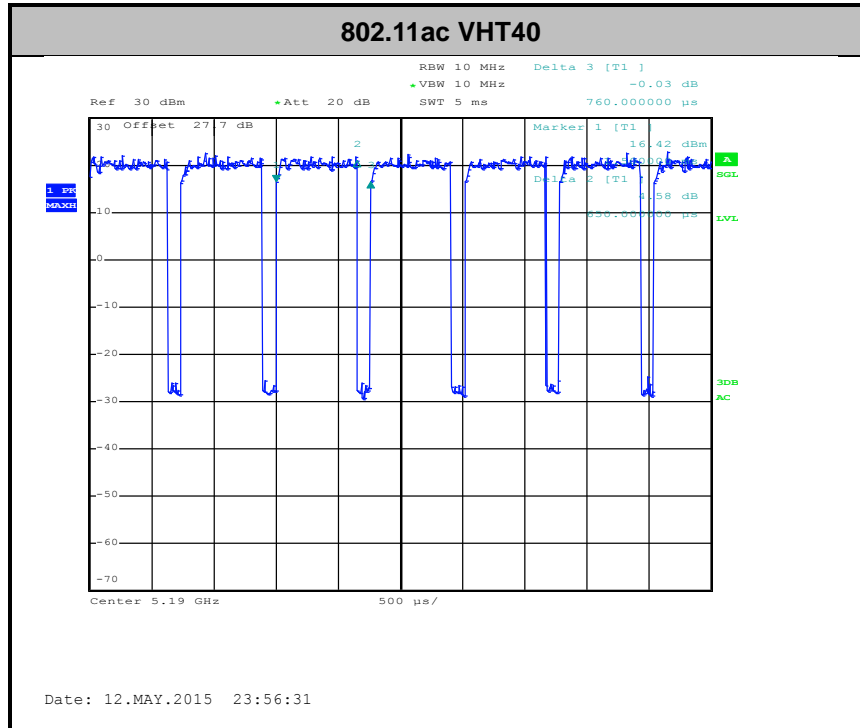
Please refer to Appendix A.

3.4.7 Duty Cycle









### 3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix A.

## 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 $\mu$ 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.

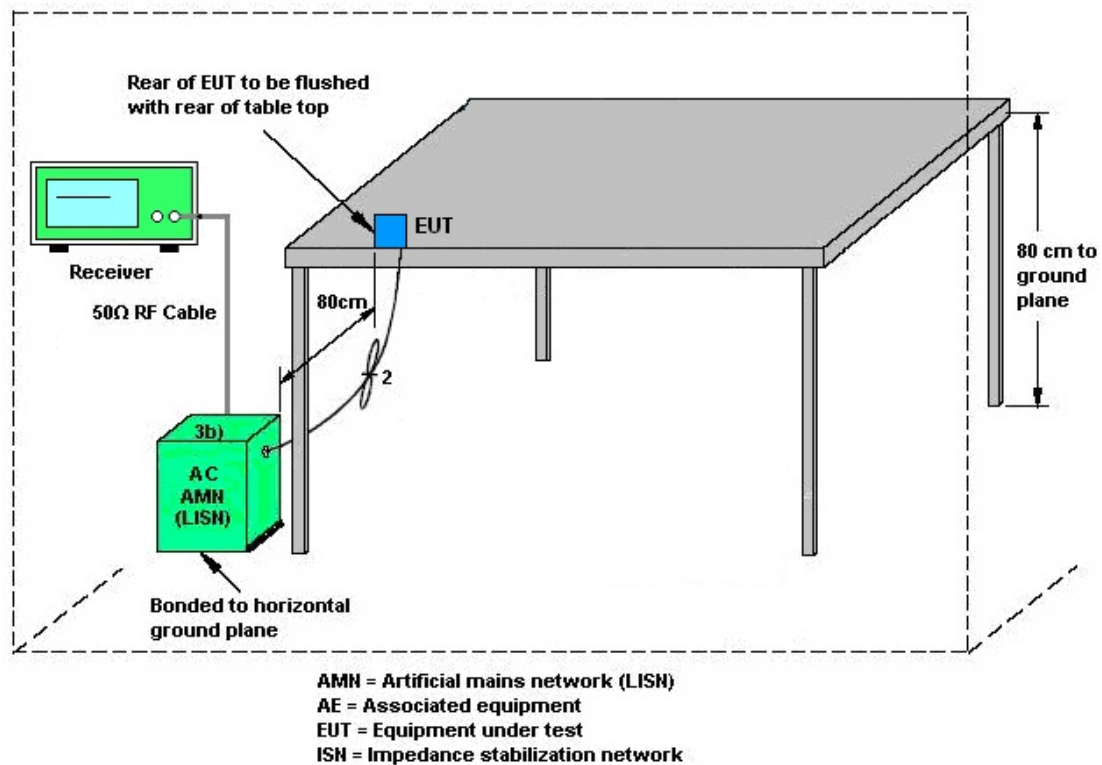
### 3.5.2 Measuring Instruments

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

### 3.5.3 Test Procedures

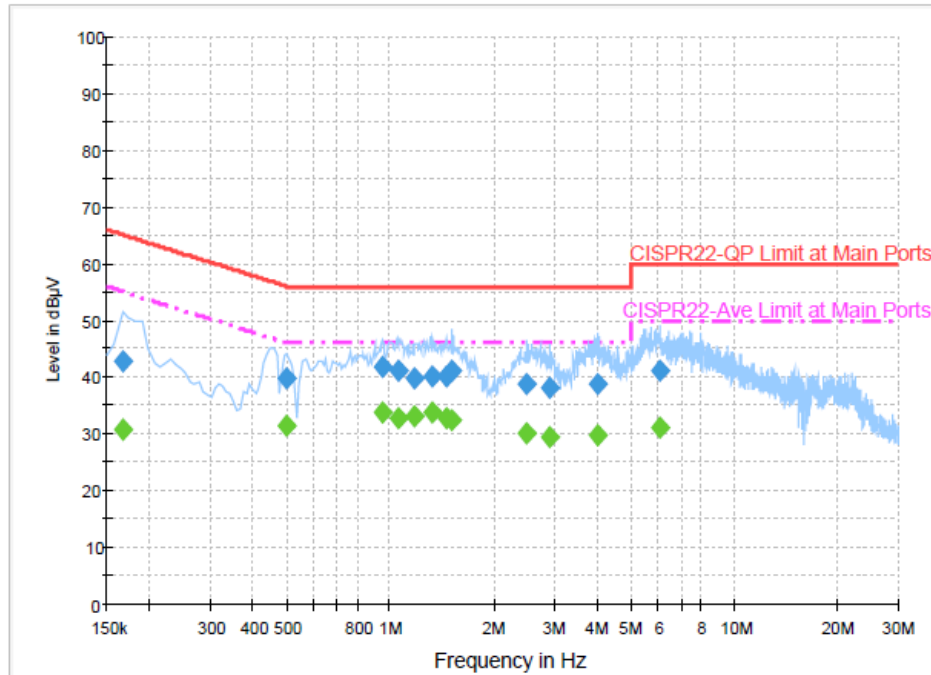
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

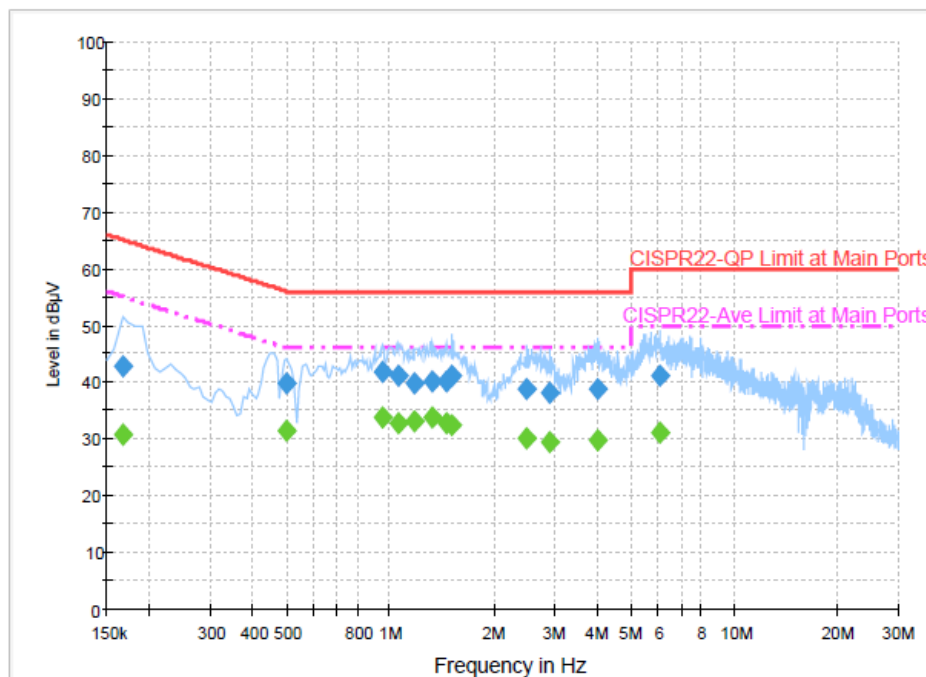
Test Mode :	Mode 1	Temperature :	24~26°C
Test Engineer :	Eric Jeng	Relative Humidity :	55~57%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (5GHz) Link + Bluetooth Link + Earphone + MPEG4 + SD Card + USB Cable (Charging from Adapter)		



#### Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	42.7	Off	L1	19.4	22.5	65.2
0.502000	39.7	Off	L1	19.5	16.3	56.0
0.950000	41.8	Off	L1	19.6	14.2	56.0
1.062000	41.2	Off	L1	19.5	14.8	56.0
1.182000	39.9	Off	L1	19.6	16.1	56.0
1.326000	40.2	Off	L1	19.6	15.8	56.0
1.462000	40.3	Off	L1	19.6	15.7	56.0
1.510000	41.2	Off	L1	19.5	14.8	56.0
2.486000	38.8	Off	L1	19.7	17.2	56.0
2.910000	38.2	Off	L1	19.7	17.8	56.0
3.998000	38.7	Off	L1	19.7	17.3	56.0
6.062000	41.2	Off	L1	19.7	18.8	60.0

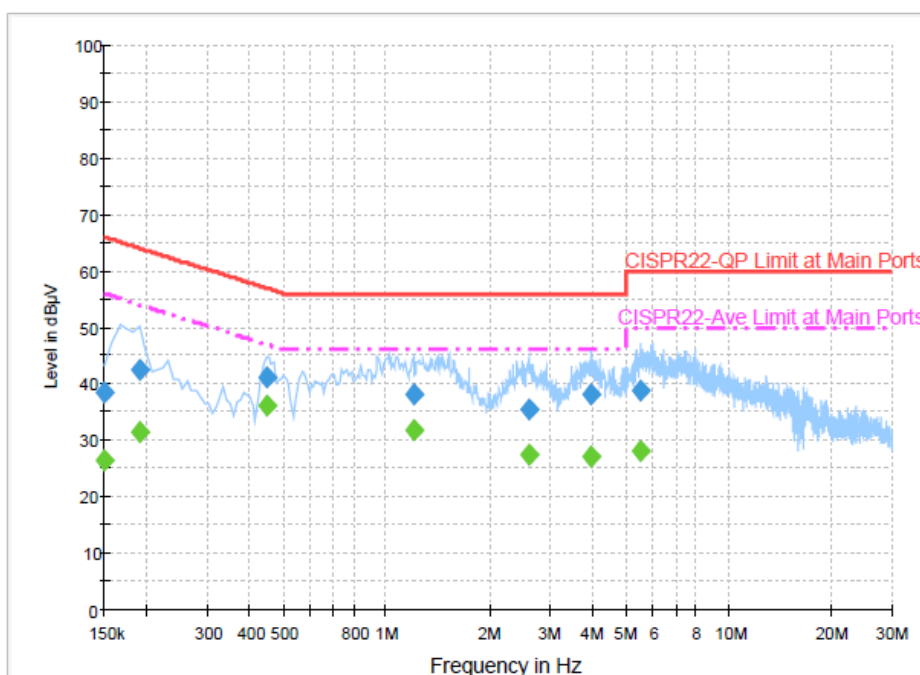
Test Mode :	Mode 1	Temperature :	24~26°C
Test Engineer :	Eric Jeng	Relative Humidity :	55~57%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN (5GHz) Link + Bluetooth Link + Earphone + MPEG4 + SD Card + USB Cable (Charging from Adapter)		



#### Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.166000	30.8	Off	L1	19.4	24.4	55.2
0.502000	31.4	Off	L1	19.5	14.6	46.0
0.950000	33.9	Off	L1	19.6	12.1	46.0
1.062000	32.8	Off	L1	19.5	13.2	46.0
1.182000	33.2	Off	L1	19.6	12.8	46.0
1.326000	33.8	Off	L1	19.6	12.2	46.0
1.462000	32.8	Off	L1	19.6	13.2	46.0
1.510000	32.5	Off	L1	19.5	13.5	46.0
2.486000	30.2	Off	L1	19.7	15.8	46.0
2.910000	29.5	Off	L1	19.7	16.5	46.0
3.998000	29.9	Off	L1	19.7	16.1	46.0
6.062000	31.0	Off	L1	19.7	19.0	50.0

Test Mode :	Mode 1	Temperature :	24~26℃
Test Engineer :	Eric Jeng	Relative Humidity :	55~57%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN (5GHz) Link + Bluetooth Link + Earphone + MPEG4 + SD Card + USB Cable (Charging from Adapter)		



#### Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	38.3	Off	N	19.5	27.7	66.0
0.190000	42.5	Off	N	19.5	21.5	64.0
0.446000	41.1	Off	N	19.4	15.8	56.9
1.198000	38.0	Off	N	19.6	18.0	56.0
2.598000	35.6	Off	N	19.6	20.4	56.0
3.982000	38.2	Off	N	19.7	17.8	56.0
5.542000	38.8	Off	N	19.7	21.2	60.0

#### Final Result : Average

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	26.5	Off	N	19.5	29.5	56.0
0.190000	31.5	Off	N	19.5	22.5	54.0
0.446000	36.0	Off	N	19.4	10.9	46.9
1.198000	31.8	Off	N	19.6	14.2	46.0
2.598000	27.3	Off	N	19.6	18.7	46.0
3.982000	27.0	Off	N	19.7	19.0	46.0
5.542000	28.0	Off	N	19.7	22.0	50.0

## 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.

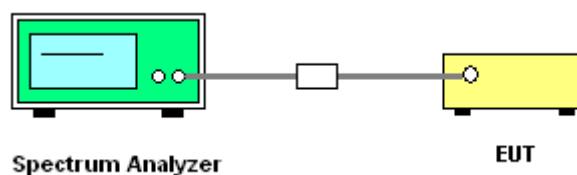
### 3.6.2 Measuring Instruments

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**

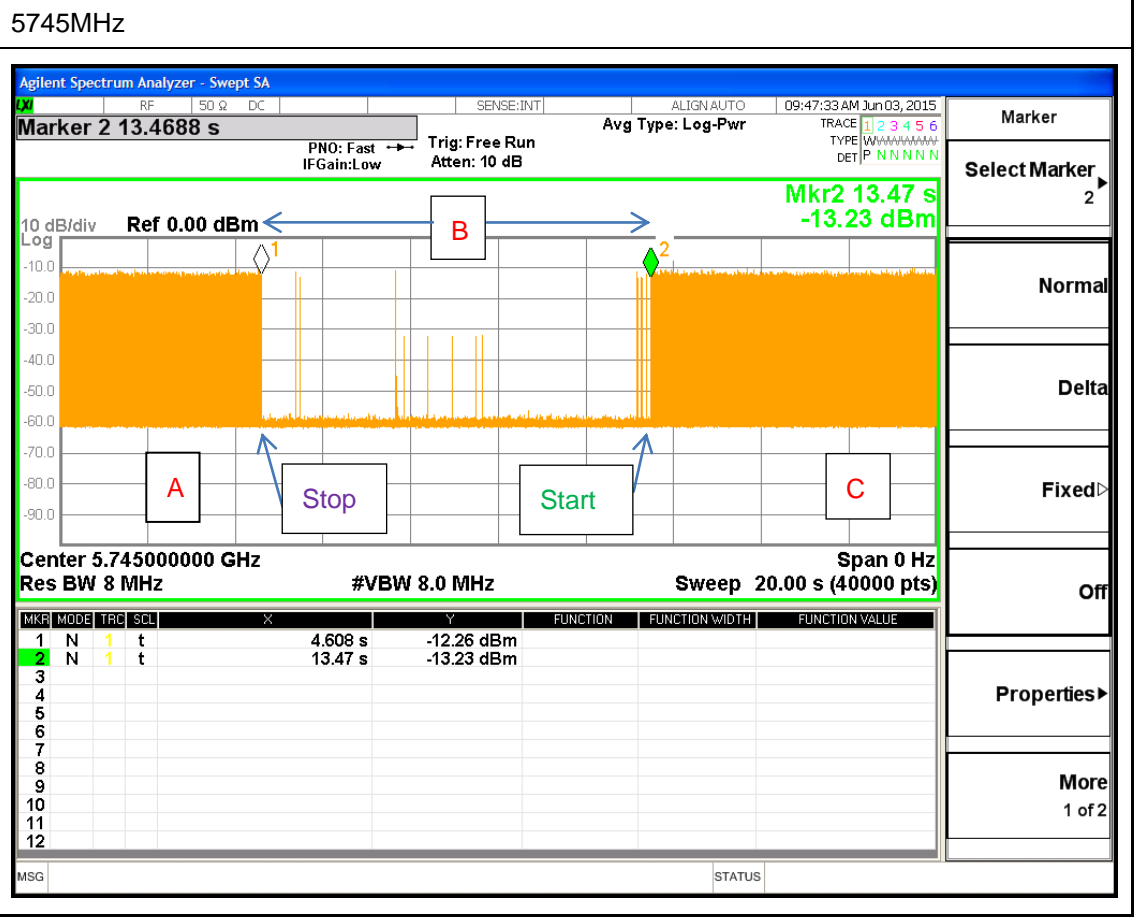
EUT is verified this characteristic during the function check of normal sample associated with an access point:

- A. Information start: make EUT supply information to the access point.
- B. Information stop: stop supplying information to the access point.

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

- C. Information start: make EUT supply information to the access point again.

The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.



**Note:** The control / signalling information during the period B is precluded.

## **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
Power Meter	Anritsu	ML2495A	1218006	300MHz~40GHz	Oct. 18, 2014	May 12, 2015~ Jun. 03, 2015	Oct. 17, 2015	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 09, 2014	May 12, 2015~ Jun. 03, 2015	Aug. 08, 2015	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz~40GHz	Oct. 17, 2014	May 12, 2015~ Jun. 03, 2015	Oct. 16, 2015	Conducted (TH05-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Mar. 18, 2015	Apr. 14, 2015~ Jun 02, 2015	Mar. 17, 2016	Conducted (TH05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jul. 28, 2014	May 14, 2015 ~ May 15, 2015	Jul. 27, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 03, 2014	May 14, 2015 ~ May 15, 2015	Nov. 02, 2015	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 24, 2014	May 14, 2015 ~ May 15, 2015	Nov. 23, 2015	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Oct. 24, 2014	May 14, 2015 ~ May 15, 2015	Oct. 23, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 03, 2014	May 14, 2015 ~ May 15, 2015	Oct. 02, 2015	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 20, 2014	May 14, 2015 ~ May 15, 2015	Nov. 19, 2015	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHZ	Sep. 24, 2014	May 14, 2015 ~ May 15, 2015	Sep. 23, 2015	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	May 14, 2015 ~ May 15, 2015	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	N/A	May 14, 2015 ~ May 15, 2015	N/A	Radiation (03CH11-HY)
Preamplifier	MITEQ	JS44-1800400 0-33-8P	1840917	18GHz ~ 40GHz	Jun. 09, 2014	May 14, 2015 ~ May 15, 2015	Jun. 08, 2015	Radiation (03CH11-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz – 2.75GHz	Dec. 01, 2014	May 09, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2014	May 09, 2015	Dec. 01, 2015	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2014	May 09, 2015	Dec. 07, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 09, 2015	N/A	Conduction (CO05-HY)

## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	4.90
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## Appendix A. Conducted Test Results

Test Engineer:	Luffy Lin	Temperature:	24~26	°C
Test Date:	2015/05/12 ~ 2015/06/03	Relative Humidity:	45~49	%

**TEST RESULTS DATA**  
**6dB and 99% OBW**

Band IV							
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	6 dB Bandwidth (MHz)	FCC 6dB Bandwidth Limit (MHz)	Pass/Fail
11a	6Mbps	1	149	5745	15.12	0.5	Pass
11a	6Mbps	1	157	5785	15.16	0.5	Pass
11a	6Mbps	1	165	5825	15.16	0.5	Pass
HT20	MCS 0	1	149	5745	15.12	0.5	Pass
HT20	MCS 0	1	157	5785	15.16	0.5	Pass
HT20	MCS 0	1	165	5825	15.16	0.5	Pass
HT40	MCS 0	1	151	5755	35.12	0.5	Pass
HT40	MCS 0	1	159	5795	35.2	0.5	Pass
VHT20	MCS 0	1	149	5745	15.12	0.5	Pass
VHT20	MCS 0	1	157	5785	15.16	0.5	Pass
VHT20	MCS 0	1	165	5825	15.12	0.5	Pass
VHT40	MCS 0	1	151	5755	35.12	0.5	Pass
VHT40	MCS 0	1	159	5795	35.2	0.5	Pass
VHT80	MCS 0	1	155	5775	75.2	0.5	Pass

**TEST RESULTS DATA**  
**Average Power Table**

FCC Band IV										
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	149	5745	0.33	16.96	30.00	4.64		Pass
11a	6Mbps	1	157	5785	0.33	16.98	30.00	4.64		Pass
11a	6Mbps	1	165	5825	0.33	16.64	30.00	4.64		Pass
HT20	MCS 0	1	149	5745	0.35	16.91	30.00	4.64		Pass
HT20	MCS 0	1	157	5785	0.35	16.86	30.00	4.64		Pass
HT20	MCS 0	1	165	5825	0.35	16.61	30.00	4.64		Pass
HT40	MCS 0	1	151	5755	0.68	16.63	30.00	4.64		Pass
HT40	MCS 0	1	159	5795	0.68	16.72	30.00	4.64		Pass
VHT20	MCS 0	1	149	5745	0.35	13.93	30.00	4.64		Pass
VHT20	MCS 0	1	157	5785	0.35	13.99	30.00	4.64		Pass
VHT20	MCS 0	1	165	5825	0.35	13.69	30.00	4.64		Pass
VHT40	MCS 0	1	151	5755	0.68	13.65	30.00	4.64		Pass
VHT40	MCS 0	1	159	5795	0.68	13.69	30.00	4.64		Pass
VHT80	MCS 0	1	155	5775	1.15	13.60	30.00	4.64		Pass



**TEST RESULTS DATA**  
**Power Spectral Density**

Band IV										
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Duty Factor (dB)	10log (500kHz /RBW) Factor (dB)	Average Power Density (dBm/500kHz)	Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass/Fail
11a	6Mbps	1	149	5745	0.33	2.22	3.35	30.00	4.64	Pass
11a	6Mbps	1	157	5785	0.33	2.22	3.31	30.00	4.64	Pass
11a	6Mbps	1	165	5825	0.33	2.22	3.16	30.00	4.64	Pass
HT20	MCS 0	1	149	5745	0.35	2.22	3.06	30.00	4.64	Pass
HT20	MCS 0	1	157	5785	0.35	2.22	3.09	30.00	4.64	Pass
HT20	MCS 0	1	165	5825	0.35	2.22	2.75	30.00	4.64	Pass
HT40	MCS 0	1	151	5755	0.68	2.22	-0.01	30.00	4.64	Pass
HT40	MCS 0	1	159	5795	0.68	2.22	-0.19	30.00	4.64	Pass
VHT20	MCS 0	1	149	5745	0.35	2.22	0.07	30.00	4.64	Pass
VHT20	MCS 0	1	157	5785	0.35	2.22	0.27	30.00	4.64	Pass
VHT20	MCS 0	1	165	5825	0.35	2.22	0.56	30.00	4.64	Pass
VHT40	MCS 0	1	151	5755	0.68	2.22	-3.15	30.00	4.64	Pass
VHT40	MCS 0	1	159	5795	0.68	2.22	-3.10	30.00	4.64	Pass
VHT80	MCS 0	1	155	5775	1.15	2.22	-1.49	30.00	4.64	Pass

**TEST RESULTS DATA**  
**Frequency Stability**

Band IV										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6M bps	1	149	5745	5745.000	0.000	0.00	25	3.4	
11a	6M bps	1	149	5745	5745.000	0.000	0.00	25	4.2	
11a	6M bps	1	149	5745	5745.000	0.000	0.00	25	3.7	
11a	6M bps	1	149	5745	5745.000	0.000	0.00	0	3.7	
11a	6M bps	1	149	5745	5745.000	0.000	0.00	35	3.7	

## Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang and Derreck Chen	Temperature :	22~24°C
		Relative Humidity :	48~51%

Band 4 - 5725~5850MHz

WIFI 802.11a (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 )
802.11a CH 149 5745MHz		5714.12	55.04	-18.96	74	47	32.29	9.39	33.64	265	239	P	H
		5723	64.29	-14.01	78.3	56.18	32.31	9.44	33.64	265	239	P	H
		5714.92	45.95	-8.05	54	37.91	32.29	9.39	33.64	265	239	A	H
	*	5747	107.92	-	-	99.79	32.34	9.44	33.65	265	239	P	H
	*	5747	100.25	-	-	92.12	32.34	9.44	33.65	265	239	A	H
													H
													H
													H
		5703.96	52.35	-21.65	74	44.3	32.29	9.39	33.63	100	245	P	V
		5724.92	64.2	-14.1	78.3	56.09	32.31	9.44	33.64	100	245	P	V
		5715	44.01	-9.99	54	35.97	32.29	9.39	33.64	100	245	A	V
	*	5747	105.45	-	-	97.32	32.34	9.44	33.65	100	245	P	V
	*	5747	97.98	-	-	89.85	32.34	9.44	33.65	100	245	A	V
													V
													V
													V

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 157 5785MHz		5693.72	52.69	-21.31	74	44.66	32.27	9.39	33.63	233	240	P	H
		5715.8	53.85	-24.45	78.3	45.81	32.29	9.39	33.64	233	240	P	H
		5685.56	44.74	-9.26	54	36.71	32.27	9.39	33.63	233	240	A	H
	*	5784	106.4	-	-	98.18	32.39	9.49	33.66	233	240	P	H
	*	5784	99.78	-	-	91.56	32.39	9.49	33.66	233	240	A	H
		5857.76	53.12	-25.18	78.3	44.76	32.51	9.54	33.69	233	240	P	H
		5887.52	52.97	-21.03	74	44.54	32.56	9.57	33.7	233	240	P	H
		5861.92	44.62	-9.38	54	36.26	32.51	9.54	33.69	233	240	A	H
		5701.56	53.45	-20.55	74	45.4	32.29	9.39	33.63	100	244	P	V
		5716.68	51.5	-26.8	78.3	43.46	32.29	9.39	33.64	100	244	P	V
		5706.36	43.81	-10.19	54	35.77	32.29	9.39	33.64	100	244	A	V
	*	5786	105.07	-	-	96.83	32.41	9.49	33.66	100	244	P	V
	*	5786	98.39	-	-	90.15	32.41	9.49	33.66	100	244	A	V
		5856	51.95	-26.35	78.3	43.58	32.51	9.54	33.68	100	244	P	V
		5866.16	51.99	-22.01	74	43.63	32.51	9.54	33.69	100	244	P	V
		5864.88	43.79	-10.21	54	35.43	32.51	9.54	33.69	100	244	A	V

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 165 5825MHz	*	5827	106.74	-	-	98.43	32.46	9.52	33.67	239	235	P	H
	*	5827	100.09	-	-	91.78	32.46	9.52	33.67	239	235	A	H
		5850.88	61.35	-16.95	78.3	53.01	32.48	9.54	33.68	239	235	P	H
		5888.72	54.11	-19.89	74	45.68	32.56	9.57	33.7	239	235	P	H
		5883.68	44.86	-9.14	54	36.46	32.53	9.57	33.7	239	235	A	H
													H
													H
													H
	*	5826	103.77	-	-	95.46	32.46	9.52	33.67	100	251	P	V
	*	5826	97.11	-	-	88.8	32.46	9.52	33.67	100	251	A	V
		5851.12	57.18	-21.12	78.3	48.84	32.48	9.54	33.68	100	251	P	V
		5883.04	52.75	-21.25	74	44.34	32.53	9.57	33.69	100	251	P	V
		5861.12	43.42	-10.58	54	35.06	32.51	9.54	33.69	100	251	A	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11a (Harmonic @ 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 149 5745MHz		11490	47.65	-26.35	74	28.4	40.01	13.95	34.71	100	0	P	H
		17232	49.52	-24.48	74	27.16	41.41	16.93	35.98	100	0	P	H
													H
													H
		11490	47.49	-26.51	74	28.24	40.01	13.95	34.71	100	0	P	V
		17232	49.81	-24.19	74	27.45	41.41	16.93	35.98	100	0	P	V
													V
													V
802.11a CH 157 5785MHz		11570	47.24	-26.76	74	28.12	39.89	14	34.77	100	0	P	H
		17352	50.39	-23.61	74	27.7	41.67	17	35.98	100	0	P	H
													H
													H
		11570	47.72	-26.28	74	28.6	39.89	14	34.77	100	0	P	V
		17352	50.65	-23.35	74	27.96	41.67	17	35.98	100	0	P	V
													V
													V
802.11a CH 165 5825MHz		11650	46.75	-27.25	74	27.73	39.78	14.05	34.81	100	0	P	H
		17472	50.5	-23.5	74	27.48	41.93	17.08	35.99	100	0	P	H
													H
													H
		11650	47.14	-26.86	74	28.12	39.78	14.05	34.81	100	0	P	V
		17472	49.82	-24.18	74	26.8	41.93	17.08	35.99	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11n HT20 (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)
<b>802.11n HT20 CH 149 5745MHz</b>		5711.16	54.21	-19.79	74	46.17	32.29	9.39	33.64	106	244	P	H
		5723.8	65.05	-13.25	78.3	56.94	32.31	9.44	33.64	106	244	P	H
		5714.68	45.19	-8.81	54	37.15	32.29	9.39	33.64	106	244	A	H
	*	5745	105.32	-	-	97.19	32.34	9.44	33.65	106	244	P	H
	*	5745	99.09	-	-	90.96	32.34	9.44	33.65	106	244	A	H
													H
													H
													H
		5710.84	54.48	-19.52	74	46.44	32.29	9.39	33.64	100	250	P	V
		5724.92	65.07	-13.23	78.3	56.96	32.31	9.44	33.64	100	250	P	V
		5715	45.37	-8.63	54	37.33	32.29	9.39	33.64	100	250	A	V
	*	5744	105.49	-	-	97.36	32.34	9.44	33.65	100	250	P	V
	*	5744	99.14	-	-	91.01	32.34	9.44	33.65	100	250	A	V
													V
													V
													V

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)
802.11n HT20 CH 157 5785MHz		5698.84	52.65	-21.35	74	44.62	32.27	9.39	33.63	100	243	P	H
		5716.28	52.46	-25.84	78.3	44.42	32.29	9.39	33.64	100	243	P	H
		5694.44	44.3	-9.7	54	36.27	32.27	9.39	33.63	100	243	A	H
	*	5787	105.52	-	-	97.28	32.41	9.49	33.66	100	243	P	H
	*	5787	98.89	-	-	90.65	32.41	9.49	33.66	100	243	A	H
		5856.56	52.53	-25.77	78.3	44.16	32.51	9.54	33.68	100	243	P	H
		5872.16	53.9	-20.1	74	45.52	32.53	9.54	33.69	100	243	P	H
		5864.24	44.46	-9.54	54	36.1	32.51	9.54	33.69	100	243	A	H
		5699.8	54.9	-19.1	74	46.87	32.27	9.39	33.63	100	248	P	V
		5722.76	52.57	-25.73	78.3	44.46	32.31	9.44	33.64	100	248	P	V
		5691.24	44.73	-9.27	54	36.7	32.27	9.39	33.63	100	248	A	V
	*	5786	105.57	-	-	97.33	32.41	9.49	33.66	100	248	P	V
	*	5786	98.97	-	-	90.73	32.41	9.49	33.66	100	248	A	V
		5850.32	52.62	-25.68	78.3	44.28	32.48	9.54	33.68	100	248	P	V
		5874.64	53.06	-20.94	74	44.68	32.53	9.54	33.69	100	248	P	V
		5860.8	44.47	-9.53	54	36.11	32.51	9.54	33.69	100	248	A	V



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 )
802.11n HT20 CH 165 5825MHz	*	5825	107.03	-	-	98.72	32.46	9.52	33.67	242	56	P	H
	*	5825	99.77	-	-	91.46	32.46	9.52	33.67	242	56	A	H
		5851.52	62.63	-15.67	78.3	54.29	32.48	9.54	33.68	242	56	P	H
		5862.96	54.24	-19.76	74	45.88	32.51	9.54	33.69	242	56	P	H
		5879.68	44.98	-9.02	54	36.6	32.53	9.54	33.69	242	56	A	H
													H
													H
													H
	*	5825	103.71	-	-	95.4	32.46	9.52	33.67	100	277	P	V
	*	5825	96.85	-	-	88.54	32.46	9.52	33.67	100	277	A	V
		5851.36	57.88	-20.42	78.3	49.54	32.48	9.54	33.68	100	277	P	V
		5873	53.26	-20.74	74	44.88	32.53	9.54	33.69	100	277	P	V
		5867	43.49	-10.51	54	35.13	32.51	9.54	33.69	100	277	A	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11n HT20 (Harmonic @ 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)
802.11n HT20 CH 149 5745MHz		11490	47.96	-26.04	74	28.71	40.01	13.95	34.71	100	0	P	H
		17232	47.15	-26.85	74	24.79	41.41	16.93	35.98	100	0	P	H
													H
													H
		11490	48.25	-25.75	74	29	40.01	13.95	34.71	100	0	P	V
		17232	48.44	-25.56	74	26.08	41.41	16.93	35.98	100	0	P	V
													V
													V
802.11n HT20 CH 157 5785MHz		11570	48.15	-25.85	74	29.03	39.89	14	34.77	100	0	P	H
		17352	47.91	-26.09	74	25.22	41.67	17	35.98	100	0	P	H
													H
													H
		11570	47.86	-26.14	74	28.74	39.89	14	34.77	100	0	P	V
		17352	48.85	-25.15	74	26.16	41.67	17	35.98	100	0	P	V
													V
													V
802.11n HT20 CH 165 5825MHz		11650	46.71	-27.29	74	27.69	39.78	14.05	34.81	100	0	P	H
		17472	48.13	-25.87	74	25.11	41.93	17.08	35.99	100	0	P	H
													H
													H
		11650	48.86	-25.14	74	29.84	39.78	14.05	34.81	100	0	P	V
		17472	49.14	-24.86	74	26.12	41.93	17.08	35.99	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11n HT40 (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)
<b>802.11n HT40 CH 151 5755MHz</b>		5714.2	67.72	-6.28	74	59.68	32.29	9.39	33.64	241	56	P	H
		5719.24	74	-4.3	78.3	65.94	32.31	9.39	33.64	241	56	P	H
		5714.6	52.4	-1.6	54	44.36	32.29	9.39	33.64	241	56	A	H
	*	5755	104.35	-	-	96.2	32.36	9.44	33.65	241	56	P	H
	*	5755	96.69	-	-	88.54	32.36	9.44	33.65	241	56	A	H
		5850.8	53.31	-24.99	78.3	44.97	32.48	9.54	33.68	241	56	P	H
		5882.4	53.69	-20.31	74	45.28	32.53	9.57	33.69	241	56	P	H
		5863.84	44.9	-9.1	54	36.54	32.51	9.54	33.69	241	56	A	H
		5713.72	64.84	-9.16	74	56.8	32.29	9.39	33.64	100	74	P	V
		5724.28	72.74	-5.56	78.3	64.63	32.31	9.44	33.64	100	74	P	V
		5714.92	50.07	-3.93	54	42.03	32.29	9.39	33.64	100	74	A	V
	*	5755	100.52	-	-	92.37	32.36	9.44	33.65	100	74	P	V
	*	5755	94.95	-	-	86.8	32.36	9.44	33.65	100	74	A	V
		5850.64	52.44	-25.86	78.3	44.1	32.48	9.54	33.68	100	74	P	V
		5874.72	51.17	-22.83	74	42.79	32.53	9.54	33.69	100	74	P	V
		5862.32	43.48	-10.52	54	35.12	32.51	9.54	33.69	100	74	A	V

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)
802.11n HT40 CH 159 5795MHz		5700.44	53.99	-20.01	74	45.96	32.27	9.39	33.63	241	55	P	H
		5720.36	56.85	-21.45	78.3	48.79	32.31	9.39	33.64	241	55	P	H
		5711.56	45.48	-8.52	54	37.44	32.29	9.39	33.64	241	55	A	H
	*	5795	103.19	-	-	94.95	32.41	9.49	33.66	241	55	P	H
	*	5795	96.15	-	-	87.91	32.41	9.49	33.66	241	55	A	H
		5852.8	56.65	-21.65	78.3	48.31	32.48	9.54	33.68	241	55	P	H
		5869.2	57.99	-16.01	74	49.63	32.51	9.54	33.69	241	55	P	H
		5860.48	45.14	-8.86	54	36.78	32.51	9.54	33.69	241	55	A	H
		5713	54.78	-19.22	74	46.74	32.29	9.39	33.64	100	72	P	V
		5715.96	51.92	-26.38	78.3	43.88	32.29	9.39	33.64	100	72	P	V
		5702.84	44.13	-9.87	54	36.08	32.29	9.39	33.63	100	72	A	V
	*	5795	101.22	-	-	92.98	32.41	9.49	33.66	100	72	P	V
	*	5795	93.61	-	-	85.37	32.41	9.49	33.66	100	72	A	V
		5852.4	52.28	-26.02	78.3	43.94	32.48	9.54	33.68	100	72	P	V
		5866.88	57.55	-16.45	74	49.19	32.51	9.54	33.69	100	72	P	V
		5862.88	43.81	-10.19	54	35.45	32.51	9.54	33.69	100	72	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11n HT40 (Harmonic @ 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)
802.11n HT40 CH 151 5755MHz		11510	47.38	-26.62	74	28.16	40	13.95	34.73	100	0	P	H
		17268	50.68	-23.32	74	28.22	41.49	16.95	35.98	100	0	P	H
													H
													H
		11510	46.7	-27.3	74	27.48	40	13.95	34.73	100	0	P	V
		17268	50.34	-23.66	74	27.88	41.49	16.95	35.98	100	0	P	V
													V
													V
802.11n HT40 CH 159 5795MHz		11590	46.97	-27.03	74	27.88	39.86	14	34.77	100	0	P	H
		17388	50.01	-23.99	74	27.23	41.74	17.03	35.99	100	0	P	H
													H
													H
		11590	46.67	-27.33	74	27.58	39.86	14	34.77	100	0	P	V
		17388	49.83	-24.17	74	27.05	41.74	17.03	35.99	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11ac VHT20 (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)
<b>802.11ac VHT20 CH 149 5745MHz</b>		5691.32	52.08	-21.92	74	44.05	32.27	9.39	33.63	240	56	P	H
		5724.84	55.89	-22.41	78.3	47.78	32.31	9.44	33.64	240	56	P	H
		5693.56	43.86	-10.14	54	35.83	32.27	9.39	33.63	240	56	A	H
	*	5745	103.93	-	-	95.8	32.34	9.44	33.65	240	56	P	H
	*	5745	96.69	-	-	88.56	32.34	9.44	33.65	240	56	A	H
													H
													H
													H
		5692.44	51.8	-22.2	74	43.77	32.27	9.39	33.63	100	262	P	V
		5723.64	53.74	-24.56	78.3	45.63	32.31	9.44	33.64	100	262	P	V
		5691.4	42.54	-11.46	54	34.51	32.27	9.39	33.63	100	262	A	V
	*	5745	100.88	-	-	92.75	32.34	9.44	33.65	100	262	P	V
	*	5745	94.2	-	-	86.07	32.34	9.44	33.65	100	262	A	V
													V
													V
													V

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 VHT20 CH 157 5785MHz		5688.92	53.4	-20.6	74	45.37	32.27	9.39	33.63	237	58	P	H
		5716.36	52	-26.3	78.3	43.96	32.29	9.39	33.64	237	58	P	H
		5692.76	44.78	-9.22	54	36.75	32.27	9.39	33.63	237	58	A	H
	*	5785	105.24	-	-	97.02	32.39	9.49	33.66	237	58	P	H
	*	5785	97.29	-	-	89.07	32.39	9.49	33.66	237	58	A	H
		5858.72	52.29	-26.01	78.3	43.93	32.51	9.54	33.69	237	58	P	H
		5885.2	53.04	-20.96	74	44.64	32.53	9.57	33.7	237	58	P	H
		5883.12	44.08	-9.92	54	35.67	32.53	9.57	33.69	237	58	A	H
		5687.96	51.04	-22.96	74	43.01	32.27	9.39	33.63	100	260	P	V
		5723.16	50.72	-27.58	78.3	42.61	32.31	9.44	33.64	100	260	P	V
		5691.56	42.93	-11.07	54	34.9	32.27	9.39	33.63	100	260	A	V
	*	5785	101.9	-	-	93.68	32.39	9.49	33.66	100	260	P	V
	*	5785	94.56	-	-	86.34	32.39	9.49	33.66	100	260	A	V
		5850.16	49.92	-28.38	78.3	41.58	32.48	9.54	33.68	100	260	P	V
		5867.92	52.74	-21.26	74	44.38	32.51	9.54	33.69	100	260	P	V
		5885	43.07	-10.93	54	34.67	32.53	9.57	33.7	100	260	A	V

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 VHT20 CH 165 5825MHz	*	5825	104.16	-	-	95.85	32.46	9.52	33.67	244	55	P	H
	*	5825	96.44	-	-	88.13	32.46	9.52	33.67	244	55	A	H
		5850.48	52.15	-26.15	78.3	43.81	32.48	9.54	33.68	244	55	P	H
		5872.88	52.64	-21.36	74	44.26	32.53	9.54	33.69	244	55	P	H
		5887.92	43.89	-10.11	54	35.46	32.56	9.57	33.7	244	55	A	H
													H
													H
													H
	*	5825	100.96	-	-	92.65	32.46	9.52	33.67	100	260	P	V
	*	5825	94.1	-	-	85.79	32.46	9.52	33.67	100	260	A	V
		5856.4	51.54	-26.76	78.3	43.17	32.51	9.54	33.68	100	260	P	V
		5875.52	51.26	-22.74	74	42.88	32.53	9.54	33.69	100	260	P	V
		5886.96	43.32	-10.68	54	34.92	32.53	9.57	33.7	100	260	A	V
													V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



**Band 4 5725~5850MHz**

**WIFI 802.11ac VHT20 (Harmonic @ 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 VHT20 CH 149 5745MHz		11490	46.02	-27.98	74	26.77	40.01	13.95	34.71	100	0	P	H
		17232	49.11	-24.89	74	26.75	41.41	16.93	35.98	100	0	P	H
													H
													H
		11490	48.87	-25.13	74	29.62	40.01	13.95	34.71	100	0	P	V
		17232	49.78	-24.22	74	27.42	41.41	16.93	35.98	100	0	P	V
													V
													V
802.11ac VHT20 CH 157 5785MHz		11570	46.38	-27.62	74	27.26	39.89	14	34.77	100	0	P	H
		17352	49.97	-24.03	74	27.28	41.67	17	35.98	100	0	P	H
													H
													H
		11570	48.42	-25.58	74	29.3	39.89	14	34.77	100	0	P	V
		17352	49.23	-24.77	74	26.54	41.67	17	35.98	100	0	P	V
													V
													V
802.11ac VHT20 CH 165 5825MHz		11650	45.32	-28.68	74	26.3	39.78	14.05	34.81	100	0	P	H
		17472	49.94	-24.06	74	26.92	41.93	17.08	35.99	100	0	P	H
													H
													H
		11650	48.09	-25.91	74	29.07	39.78	14.05	34.81	100	0	P	V
		17472	50.2	-23.8	74	27.18	41.93	17.08	35.99	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11ac VHT40 (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)
<b>802.11ac VHT40 CH 151 5755MHz</b>		5711	53.88	-20.12	74	45.84	32.29	9.39	33.64	242	57	P	H
		5723.96	57.39	-20.91	78.3	49.28	32.31	9.44	33.64	242	57	P	H
		5715	46.05	-7.95	54	38.01	32.29	9.39	33.64	242	57	A	H
	*	5755	100.97	-	-	92.82	32.36	9.44	33.65	242	57	P	H
	*	5755	93.68	-	-	85.53	32.36	9.44	33.65	242	57	A	H
		5851.92	51.53	-26.77	78.3	43.19	32.48	9.54	33.68	242	57	P	H
		5860.72	53.26	-20.74	74	44.9	32.51	9.54	33.69	242	57	P	H
		5880.24	43.63	-10.37	54	35.25	32.53	9.54	33.69	242	57	A	H
		5712.28	51.77	-22.23	74	43.73	32.29	9.39	33.64	100	267	P	V
		5722.6	54	-24.3	78.3	45.89	32.31	9.44	33.64	100	267	P	V
		5714.84	43.85	-10.15	54	35.81	32.29	9.39	33.64	100	267	A	V
	*	5755	99.12	-	-	90.97	32.36	9.44	33.65	100	267	P	V
	*	5755	91.36	-	-	83.21	32.36	9.44	33.65	100	267	A	V
		5852.88	50.53	-27.77	78.3	42.19	32.48	9.54	33.68	100	267	P	V
		5880.72	51.64	-22.36	74	43.26	32.53	9.54	33.69	100	267	P	V
		5865.12	42.9	-11.1	54	34.54	32.51	9.54	33.69	100	267	A	V

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 VHT40 CH 159 5795MHz		5686.6	52.38	-21.62	74	44.35	32.27	9.39	33.63	237	54	P	H
		5721.08	52.97	-25.33	78.3	44.91	32.31	9.39	33.64	237	54	P	H
		5696.44	44.2	-9.8	54	36.17	32.27	9.39	33.63	237	54	A	H
	*	5795	100.25	-	-	92.01	32.41	9.49	33.66	237	54	P	H
	*	5795	93.74	-	-	85.5	32.41	9.49	33.66	237	54	A	H
		5857.36	52.48	-25.82	78.3	44.11	32.51	9.54	33.68	237	54	P	H
		5868	52.71	-21.29	74	44.35	32.51	9.54	33.69	237	54	P	H
		5861.28	44.07	-9.93	54	35.71	32.51	9.54	33.69	237	54	A	H
		5704.12	50.63	-23.37	74	42.58	32.29	9.39	33.63	100	266	P	V
		5715.96	51.18	-27.12	78.3	43.14	32.29	9.39	33.64	100	266	P	V
		5710.68	43.07	-10.93	54	35.03	32.29	9.39	33.64	100	266	A	V
	*	5795	97.85	-	-	89.61	32.41	9.49	33.66	100	266	P	V
	*	5795	91.27	-	-	83.03	32.41	9.49	33.66	100	266	A	V
		5854.72	51.08	-27.22	78.3	42.71	32.51	9.54	33.68	100	266	P	V
		5886.8	51.37	-22.63	74	42.97	32.53	9.57	33.7	100	266	P	V
		5864.88	43.13	-10.87	54	34.77	32.51	9.54	33.69	100	266	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11ac VHT40 (Harmonic @ 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 VHT40 CH 151 5755MHz		11510	47.39	-26.61	74	28.17	40	13.95	34.73	100	0	P	H
		17268	49.92	-24.08	74	27.46	41.49	16.95	35.98	100	0	P	H
													H
													H
		11510	47	-27	74	27.78	40	13.95	34.73	100	0	P	V
		17268	49.48	-24.52	74	27.02	41.49	16.95	35.98	100	0	P	V
													V
													V
802.11ac VHT40 CH 159 5795MHz		11590	47.04	-26.96	74	27.95	39.86	14	34.77	100	0	P	H
		17388	50.02	-23.98	74	27.24	41.74	17.03	35.99	100	0	P	H
													H
													H
		11590	47.19	-26.81	74	28.1	39.86	14	34.77	100	0	P	V
		17388	49.35	-24.65	74	26.57	41.74	17.03	35.99	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**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)
<b>802.11ac VHT80 CH 155 5775MHz</b>		5715	56.85	-17.15	74	48.81	32.29	9.39	33.64	252	56	P	H
		5721.48	58.79	-19.51	78.3	50.68	32.31	9.44	33.64	252	56	P	H
		5714.44	49.34	-4.66	54	41.3	32.29	9.39	33.64	252	56	A	H
	*	5775	98.41	-	-	90.18	32.39	9.49	33.65	252	56	P	H
	*	5775	90.86	-	-	82.63	32.39	9.49	33.65	252	56	A	H
		5854.24	56.1	-22.2	78.3	47.73	32.51	9.54	33.68	252	56	P	H
		5863.44	52.89	-21.11	74	44.53	32.51	9.54	33.69	252	56	P	H
		5860.64	45.44	-8.56	54	37.08	32.51	9.54	33.69	252	56	A	H
		5710.04	54.54	-19.46	74	46.5	32.29	9.39	33.64	102	70	P	V
		5715.16	55.47	-22.83	78.3	47.43	32.29	9.39	33.64	102	70	P	V
		5714.92	48.08	-5.92	54	40.04	32.29	9.39	33.64	102	70	A	V
	*	5775	94.74	-	-	86.51	32.39	9.49	33.65	102	70	P	V
	*	5775	88.29	-	-	80.06	32.39	9.49	33.65	102	70	A	V
		5853.84	54.82	-23.48	78.3	46.45	32.51	9.54	33.68	102	70	P	V
		5862.24	55.84	-18.16	74	47.48	32.51	9.54	33.69	102	70	P	V
		5860.8	44.39	-9.61	54	36.03	32.51	9.54	33.69	102	70	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 4 5725~5850MHz**

**WIFI 802.11ac VHT80 (Harmonic @ 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 155 5775MHz		11550	48.23	-25.77	74	29.1	39.92	13.97	34.76	100	0	P	H
		17328	49.41	-24.59	74	26.79	41.6	17	35.98	100	0	P	H
													H
													H
		11550	48.1	-25.9	74	28.97	39.92	13.97	34.76	100	0	P	V
		17328	49.76	-24.24	74	27.14	41.6	17	35.98	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission below 1GHz**

**5GHz WIFI 802.11n HT40 (LF @ 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)
<b>5GHz 802.11n HT40 LF</b>		86.43	19.45	-20.55	40	42.07	7.89	1.28	31.79			P	H
		196.86	27.17	-16.33	43.5	48.77	8.54	1.64	31.78	121	58	P	H
		288.12	15.78	-30.22	46	32.77	12.66	2.11	31.76			P	H
		417.6	20.04	-25.96	46	32.85	16.6	2.41	31.82			P	H
		709.5	22.14	-23.86	46	31.94	19.09	3.14	32.03			P	H
		974.1	23.09	-30.91	54	29.74	20.42	3.78	30.85			P	H
													H
													H
													H
													H
													H
													H
		51.33	23.05	-16.95	40	46.58	7.23	1.04	31.8	185	63	P	V
		125.85	17.11	-26.39	43.5	35.91	11.52	1.46	31.78			P	V
		238.98	13.34	-32.66	46	32.74	10.58	1.79	31.77			P	V
		328	21.4	-24.6	46	37.42	13.58	2.17	31.77			P	V
		603.8	19.93	-26.07	46	30.53	18.55	2.89	32.04			P	V
		858.6	22.17	-23.83	46	30.25	20.11	3.44	31.63			P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against limit line.												

### Note symbol

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



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

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 )
802.11b 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”.**