



FCC RF Test Report

APPLICANT : Sony Mobile Communications Inc.
EQUIPMENT : Smart phone
BRAND NAME : SONY
TYPE NAME : PM-0890-BV
FCC ID : PY7-PM0890
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Apr. 30, 2015 and testing was completed on May 21, 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 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR543002E	Rev. 01	Initial issue of report	Jul. 01, 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	≤ 24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 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 3.27 dB at 5468.660 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.00 dB at 2.814 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

Sony Mobile Communications Inc.
Nya Vattentorget, 22188 Lund, Sweden

1.2 Manufacturer

Arima Communications Corp.
6F, No. 866, Jhongjheng Rd., Jhonghe Dist., New Taipei City 23586, Taiwan

1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is smart phone supporting, GSM/WCDMA/LTE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n, Bluetooth with FM Receiver, NFC, and GPS features, and below is details of information.

Product Feature	
Equipment	Smart phone
Brand Name	SONY
Type Name	PM-0890-BV
FCC ID	PY7-PM0890
GSM Operating Band(s)	GSM 850/900/1800/1900MHz
GPRS / EGPRS Multi Slot Class	GPRS Class 12 , EGPRS Class 12
WCDMA Operating Band(s)	FDD Band I / II / IV / V / VIII
WCDMA Rel. Version	Rel. 8
LTE Operating Band(s)	FDD Band II / IV / V / VII / XII / XIII / XVII / XXVIII
LTE Rel. Version	Rel. 8
Wi-Fi Specification	802.11a/b/g/n (HT20/HT40)
Bluetooth Version	v3.0+EDR / v4.0-LE
NFC Specification	ISO14443A / ISO14443B / Felica
Power Supply	Battery / AC Adapter / Car Charger

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 5500 MHz ~ 5580 MHz 5660 MHz ~ 5700 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 11.30 dBm / 0.0135 W 802.11n HT20 : 11.30 dBm / 0.0135 W 802.11n HT40 : 11.46 dBm / 0.0140 W <5260 MHz ~ 5320 MHz> 802.11a : 11.29 dBm / 0.0135 W 802.11n HT20 : 11.44 dBm / 0.0139 W 802.11n HT40 : 11.41 dBm / 0.0138 W <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz> 802.11a : 11.48 dBm / 0.0141 W 802.11n HT20 : 11.47 dBm / 0.0140 W 802.11n HT40 : 11.49 dBm / 0.0141 W
99% Occupied Bandwidth	802.11a : 17.80 MHz 802.11n HT20 : 18.50 MHz 802.11n HT40 : 36.70 MHz
Antenna Type	<5180 MHz ~ 5240 MHz> PIFA Antenna with gain -7.00 dBi <5260 MHz ~ 5320 MHz> PIFA Antenna with gain -6.50 dBi <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz> PIFA Antenna with gain -7.00 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)

EUT Information List				
IMEI	HW Version	SW Version	S/N	Performed Test Item
004402454681739	A	29.0.A.0.76	WUJ01HYJ4Y	RF conducted measurement
004402454681804			WUJ01HYJD7	Radiated Spurious Emission
004402454681721			WUJ01HYJ4J	Conducted Emission
004402454681408			WUJ01HYHFM	DFS

Accessory List	
AC Adapter	Model No. : EP800
	Type No. : CAA-0002016-US B
	S/N : 3113W 45 108545 for Radiation Spurious Emission 3113W 38 210631 for Conducted Emission
Battery	Model No. : LIS1579ERPC
Earphone 1	Model No. : MH410c
	Type No. : AG-1100
	S/N : 14371E6600174A0 for Conducted Emission
Earphone 2	Model No. : MH410c
	Type No. : AG-1103
	S/N : 1428204D011619A for Radiation Spurious Emission
USB Cable	Model No. : EC450
	Type No. : AI-0700
	S/N : 143412DE1065866 for Radiation Spurious Emission 134912D1000585A for Conducted Emission

Note:

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test.
3. For other wireless features of this EUT, test report will be issued separately.

1.5 Modification of EUT

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

1.6 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.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 st 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	
Test Site No.	Sporton Site No.	
	TH02-HY	CO05-HY

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

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

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



1.7 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
- ♦ 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 (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)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38	5190	46	5230
	40	5200	48	5240

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54	5270	62	5310
	56	5280	64	5320

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5600 MHz and 5650-5725 MHz Band 3 (U-NII-2C)	100	5500	116	5580
	102	5510	132	5660
	104	5520	134	5670
	108	5540	136	5680
	110	5550	140	5700
	112	5560		

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 mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	11.48	11.39	11.46	11.34	11.40	11.41	11.41	11.47

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	11.47	11.41	11.39	11.44	11.30	11.45	11.41	11.44

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	11.49	11.45	11.09	11.13	11.48	11.48	11.47	11.47



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

AC Conducted Emission	Mode 1 : GSM1900 Idle + Bluetooth Link + WLAN (5GHz) Link + MP3 + Earphone 1 + Battery + USB Cable (Charging from Adapter)
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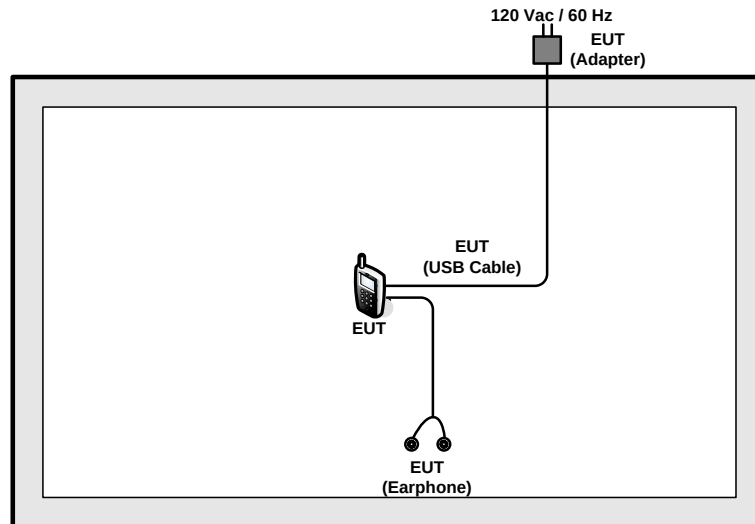
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

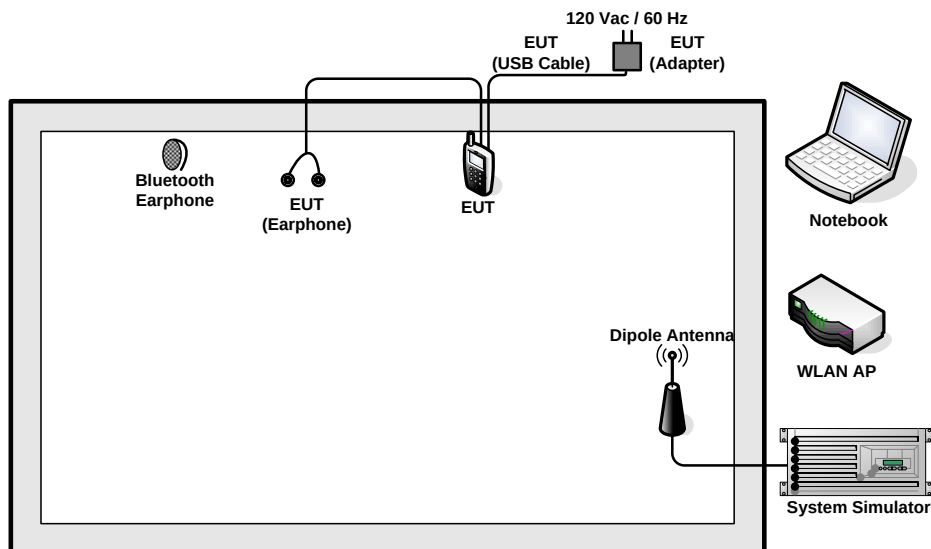
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Sony	SBH20	PY7-RD0010	Unshielded, 0.75m	N/A
4.	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
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

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

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 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.

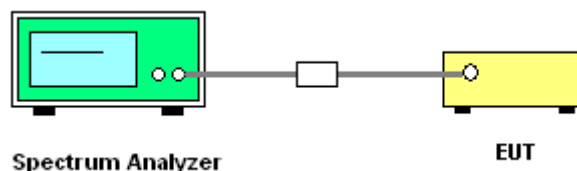
3.1.2 Measuring Instruments

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.

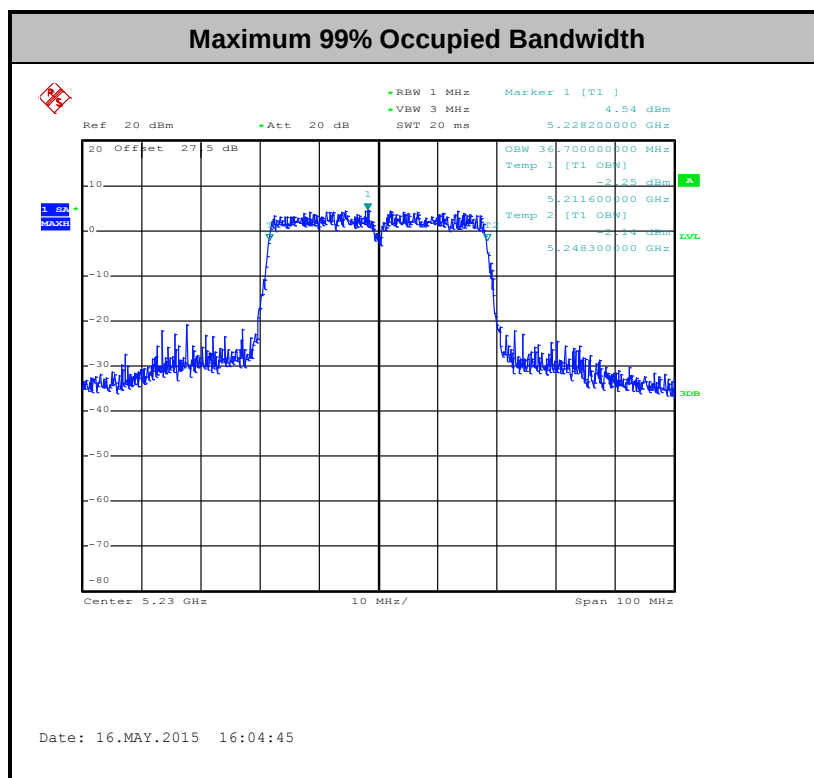
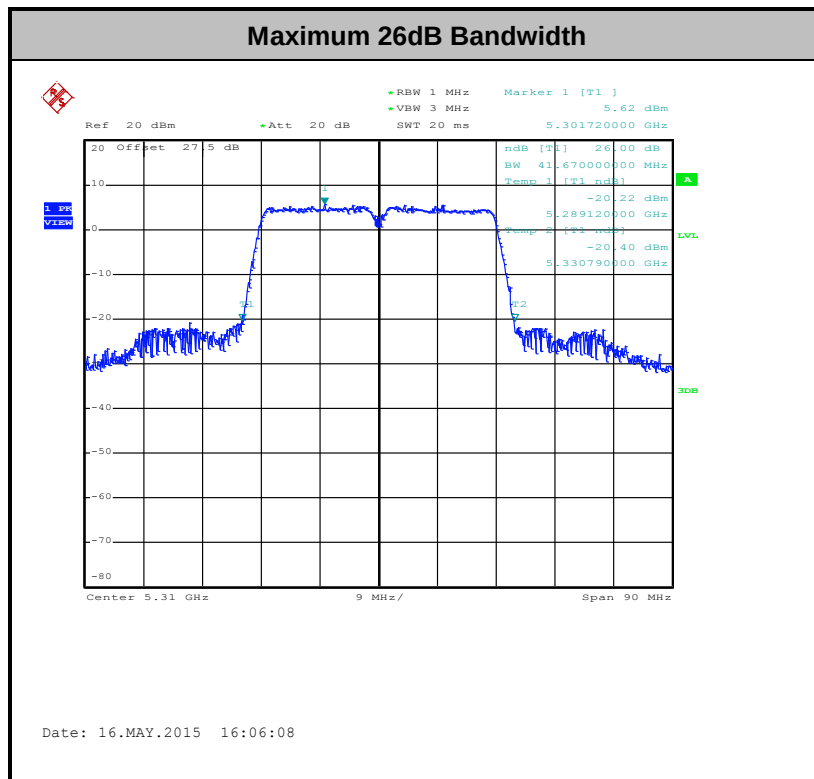
3.1.4 Test Setup





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

Please refer to Appendix A.





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 and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

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

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

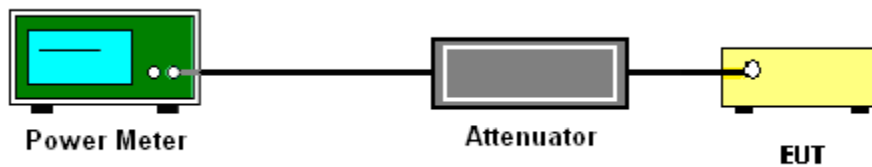
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.

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

For normal channel:



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

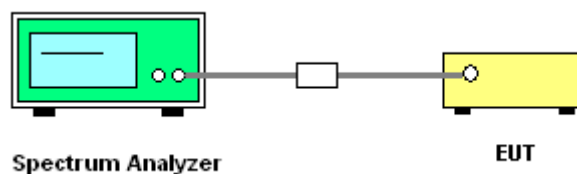
Section F) Maximum power spectral density.

Method SA-2

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

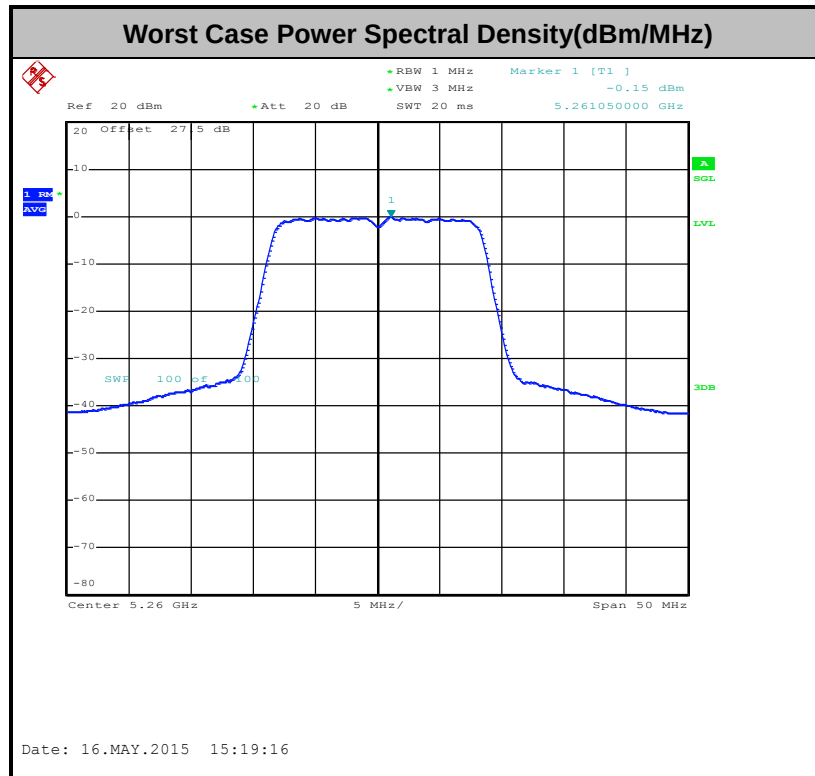
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - 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 Part15.205.

3.4.1 Limit of Unwanted Emissions

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

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

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 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.

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

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(μ s)	1/T(kHz)	VBW Setting
802.11a	89.10	1390	0.71942446	1kHz
802.11n HT20	88.44	1300	0.769230769	1kHz
802.11n HT40	79.27	650	1.538461538	2kHz

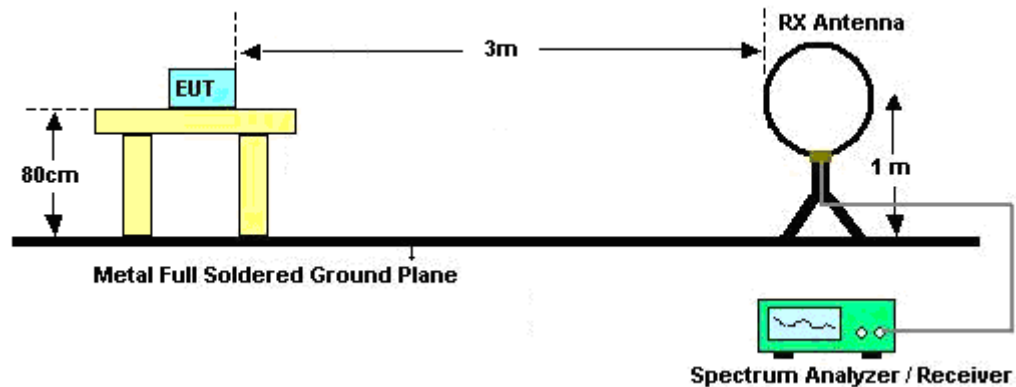
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

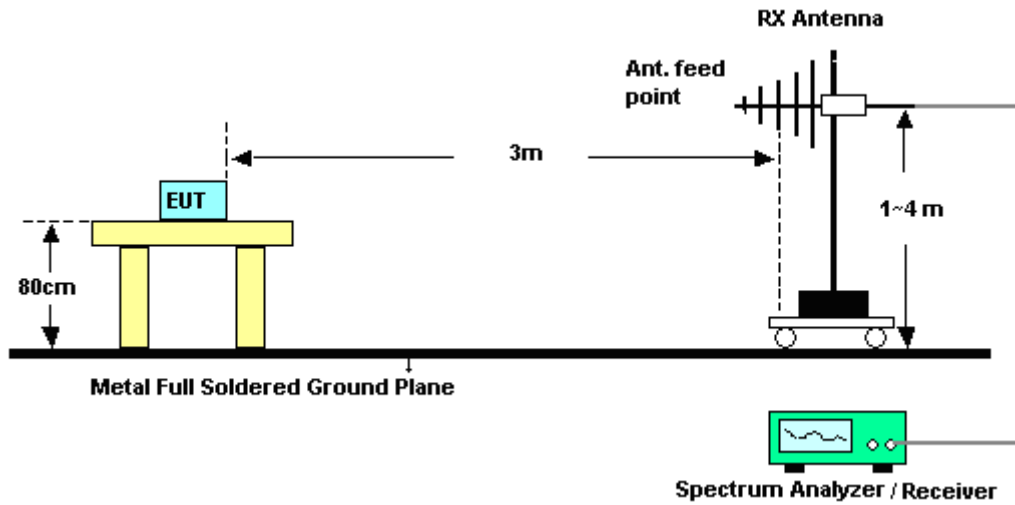
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level 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

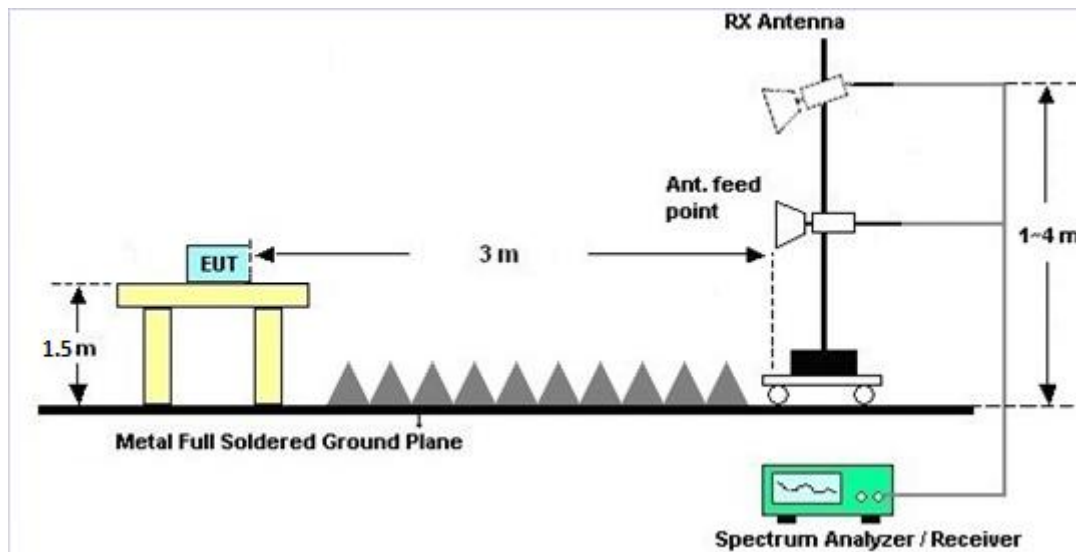
For radiated emissions below 30MHz



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 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 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.

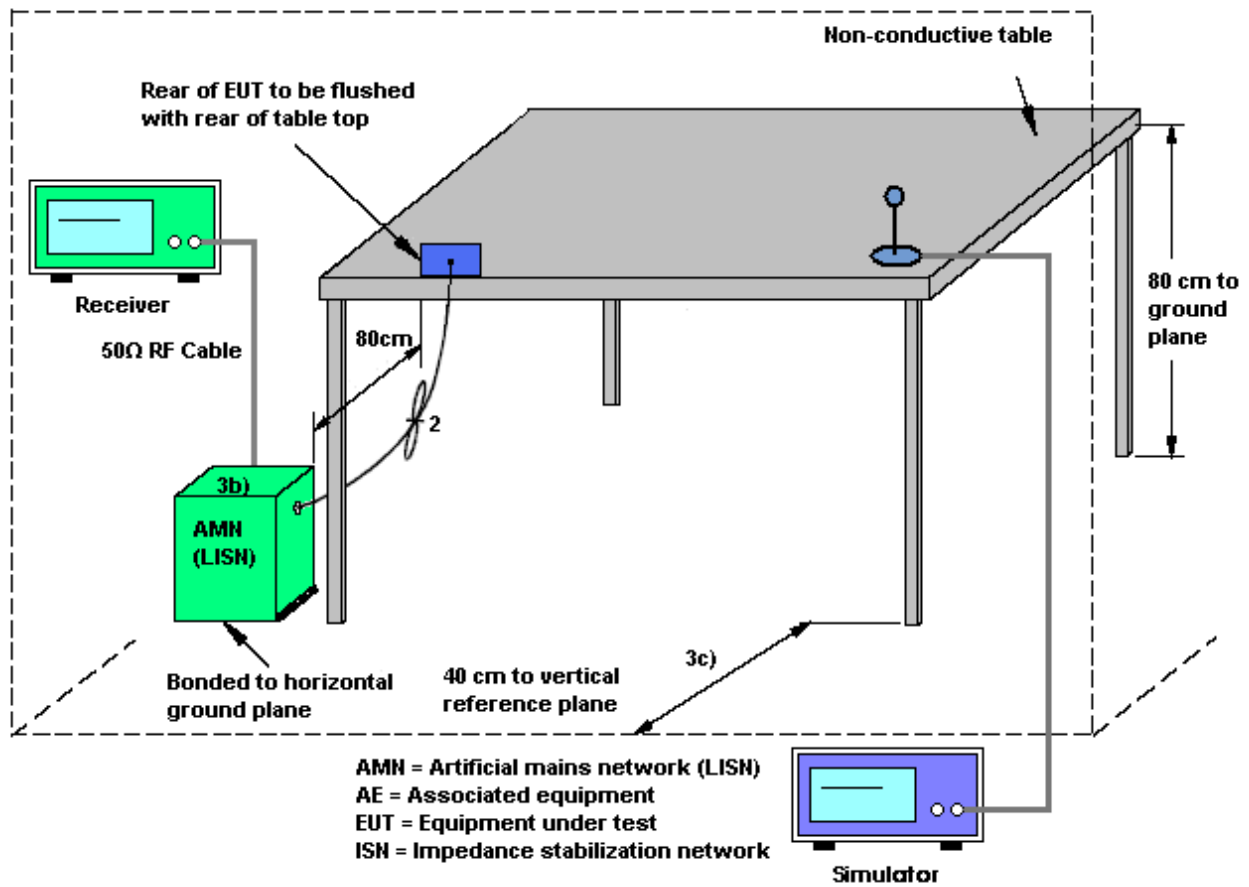
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

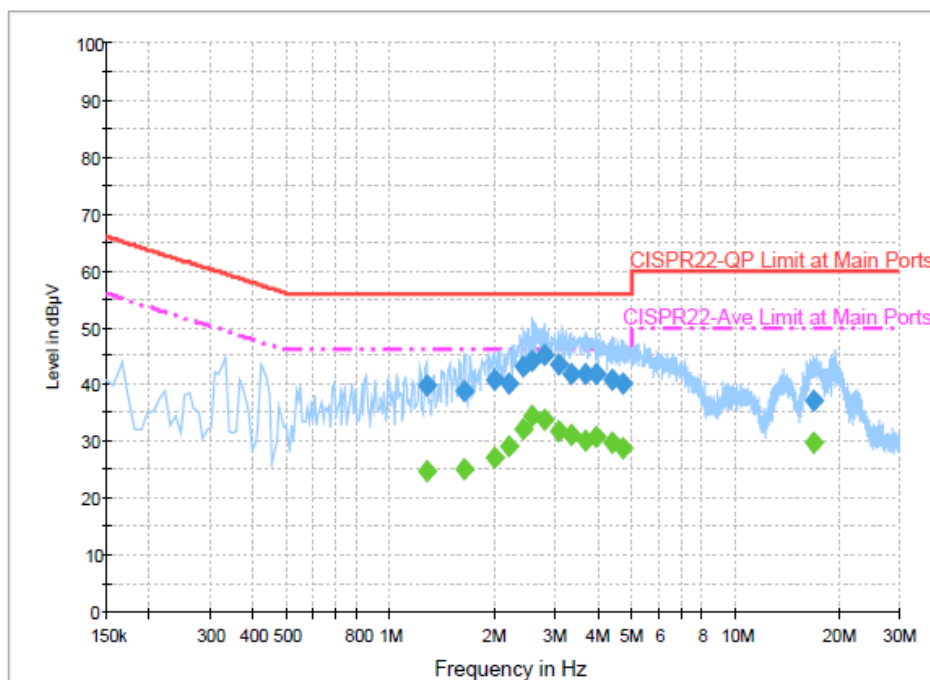
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

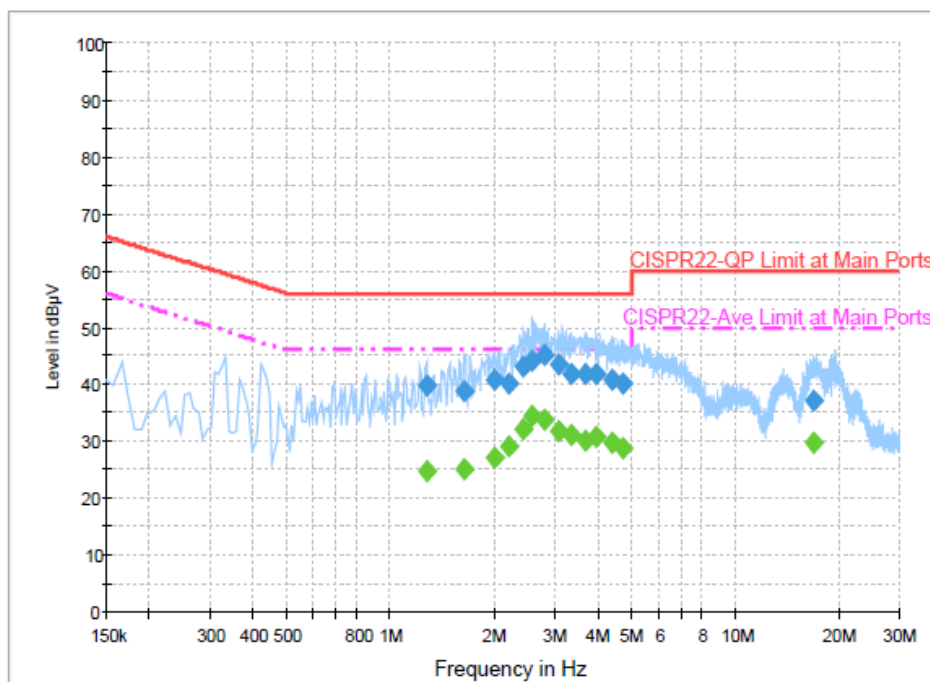
Test Mode :	Mode 1	Temperature :	22~23℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (5GHz) Link + MP3 + Earphone 1 + Battery + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

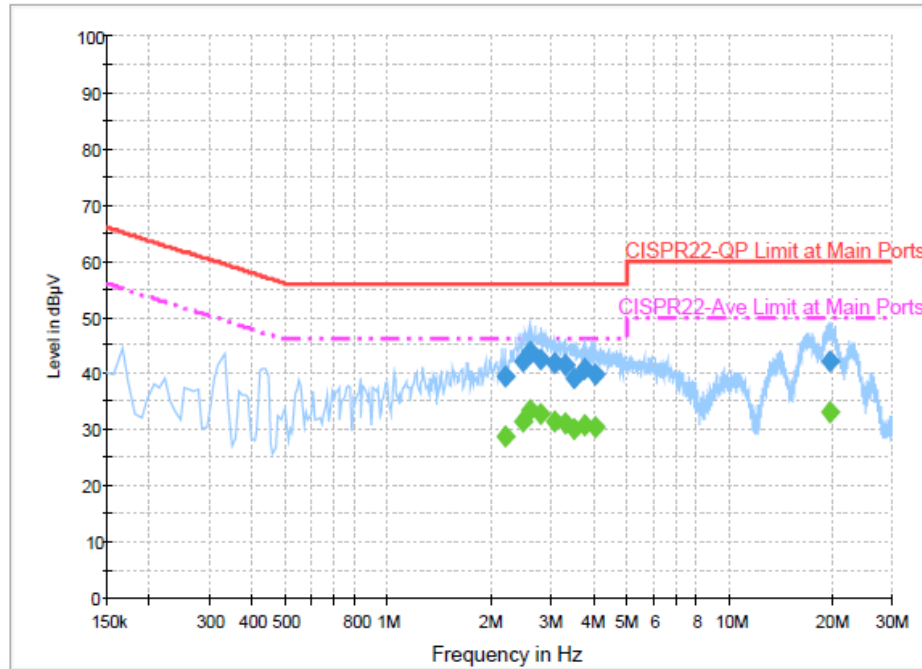
Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.278000	39.8	Off	L1	19.6	16.2	56.0
1.638000	38.7	Off	L1	19.5	17.3	56.0
2.014000	40.6	Off	L1	19.6	15.4	56.0
2.206000	40.0	Off	L1	19.7	16.0	56.0
2.430000	43.2	Off	L1	19.7	12.8	56.0
2.590000	44.1	Off	L1	19.7	11.9	56.0
2.814000	45.0	Off	L1	19.7	11.0	56.0
3.078000	43.4	Off	L1	19.7	12.6	56.0
3.358000	41.9	Off	L1	19.7	14.1	56.0
3.678000	41.8	Off	L1	19.7	14.2	56.0
3.982000	41.8	Off	L1	19.7	14.2	56.0
4.398000	40.7	Off	L1	19.7	15.3	56.0
4.766000	40.0	Off	L1	19.8	16.0	56.0
16.966000	37.1	Off	L1	20.0	22.9	60.0

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (5GHz) Link + MP3 + Earphone 1 + Battery + USB Cable (Charging from Adapter)		


Final Result : Average

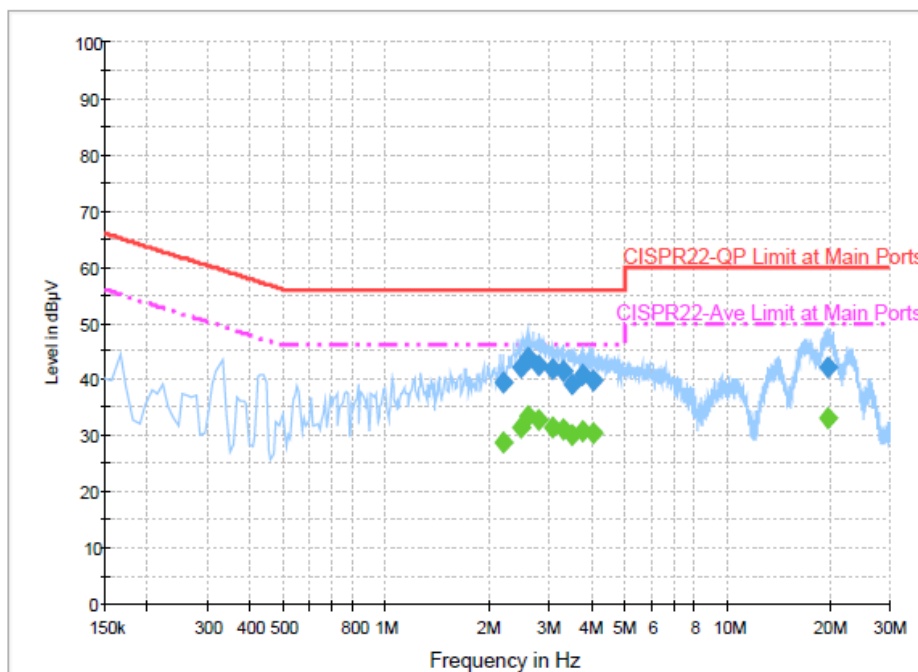
Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.278000	24.7	Off	L1	19.6	21.3	46.0
1.638000	25.2	Off	L1	19.5	20.8	46.0
2.014000	27.1	Off	L1	19.6	18.9	46.0
2.206000	29.0	Off	L1	19.7	17.0	46.0
2.430000	32.2	Off	L1	19.7	13.8	46.0
2.590000	34.3	Off	L1	19.7	11.7	46.0
2.814000	33.8	Off	L1	19.7	12.2	46.0
3.078000	31.9	Off	L1	19.7	14.1	46.0
3.358000	31.0	Off	L1	19.7	15.0	46.0
3.678000	30.2	Off	L1	19.7	15.8	46.0
3.982000	30.8	Off	L1	19.7	15.2	46.0
4.398000	29.7	Off	L1	19.7	16.3	46.0
4.766000	28.8	Off	L1	19.8	17.2	46.0
16.966000	29.7	Off	L1	20.0	20.3	50.0

Test Mode :	Mode 1	Temperature :	22~23℃
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (5GHz) Link + MP3 + Earphone 1 + Battery + USB Cable (Charging from Adapter)		


Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.214000	39.4	Off	N	19.7	16.6	56.0
2.486000	42.0	Off	N	19.7	14.0	56.0
2.598000	44.0	Off	N	19.6	12.0	56.0
2.814000	42.6	Off	N	19.7	13.4	56.0
3.094000	41.8	Off	N	19.7	14.2	56.0
3.318000	41.6	Off	N	19.7	14.4	56.0
3.526000	39.1	Off	N	19.7	16.9	56.0
3.758000	40.7	Off	N	19.7	15.3	56.0
4.038000	39.8	Off	N	19.7	16.2	56.0
19.806000	42.3	Off	N	20.1	17.7	60.0

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	53~54%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (5GHz) Link + MP3 + Earphone 1 + Battery + USB Cable (Charging from Adapter)		


Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.214000	28.7	Off	N	19.7	17.3	46.0
2.486000	31.4	Off	N	19.7	14.6	46.0
2.598000	33.3	Off	N	19.6	12.7	46.0
2.814000	32.7	Off	N	19.7	13.3	46.0
3.094000	31.3	Off	N	19.7	14.7	46.0
3.318000	31.2	Off	N	19.7	14.8	46.0
3.526000	30.1	Off	N	19.7	15.9	46.0
3.758000	30.7	Off	N	19.7	15.3	46.0
4.038000	30.3	Off	N	19.7	15.7	46.0
19.806000	33.0	Off	N	20.1	17.0	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.

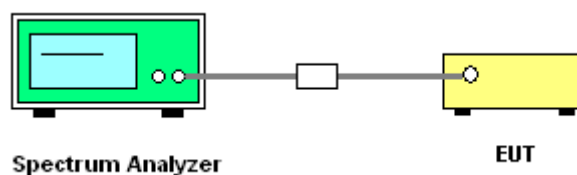
3.6.2 Measuring Instruments

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

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
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Aug. 09, 2014	May 14, 2015 ~ May 16, 2015	Aug. 08, 2015	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 11, 2014	May 14, 2015 ~ May 16, 2015	Aug. 10, 2015	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 09, 2014	May 14, 2015 ~ May 16, 2015	Jun. 08, 2015	Conducted (TH02-HY)
RF Cable	HARBOUR INDUSTRIES	LL142	Infinet CA3601-360 1-DLL	0.1MHz~40GHz	Mar. 06, 2015	May 14, 2015 ~ May 16, 2015	Mar. 05, 2016	Conducted (TH02-HY)
RF Cable	HARBOUR INDUSTRIES	LL142	Infinet CA3601-360 1-DLL	0.1MHz~40GHz	Mar. 06, 2015	May 14, 2015 ~ May 16, 2015	Mar. 05, 2016	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Dec. 01, 2014	May 14, 2015	Nov. 30, 2015	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 20, 2015	May 14, 2015	Apr. 19, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2014	May 14, 2015	Dec. 01, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 14, 2015	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2015	May 14, 2015	Jan. 01, 2016	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	May 14, 2015	N/A	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 24, 2014	May 18, 2015 ~ May 21, 2015	Nov. 23, 2015	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D	35414	30MHz~1GHz	Oct. 24, 2014	May 18, 2015 ~ May 21, 2015	Oct. 23, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 03, 2014	May 18, 2015 ~ May 21, 2015	Oct. 02, 2015	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTN-303B	TP140325	N/A	Nov. 19, 2014	May 18, 2015 ~ May 21, 2015	Nov. 18, 2015	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 20, 2014	May 18, 2015 ~ May 21, 2015	Nov. 19, 2015	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Sep. 24, 2014	May 18, 2015 ~ May 21, 2015	Sep. 23, 2015	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24967/4 MY28419/4 MY28654/4	25GHz~40GHz	Nov. 06, 2014	May 18, 2015 ~ May 21, 2015	Nov. 05, 2015	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24967/4 MY28419/4 MY28654/4	30MHz~1GHz	Nov. 06, 2014	May 18, 2015 ~ May 21, 2015	Nov. 05, 2015	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24967/4 MY28419/4 MY28654/4	1GHz~25GHz	Nov. 06, 2014	May 18, 2015 ~ May 21, 2015	Nov. 05, 2015	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	May 18, 2015 ~ May 21, 2015	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	May 18, 2015 ~ May 21, 2015	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	N/A	May 18, 2015 ~ May 21, 2015	N/A	Radiation (03CH11-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1902247	1GHz~18GHz	Nov. 25, 2014	May 18, 2015 ~ May 21, 2015	Nov. 24, 2015	Radiation (03CH11-HY)
Preamplifier	MITEQ	JS44-1800400 0-33-8P	1840917	18GHz ~ 40GHz	Jun. 09, 2014	May 18, 2015 ~ May 21, 2015	Jun. 08, 2015	Radiation (03CH11-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jul. 28, 2014	May 18, 2015 ~ May 21, 2015	Jul. 27, 2015	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 03, 2014	May 18, 2015 ~ May 21, 2015	Nov. 02, 2015	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A	MY54130085	20Hz ~ 26.5GHz	Nov. 05, 2014	May 18, 2015 ~ May 21, 2015	Nov. 04, 2015	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY84209521	9KHz~1GHz	Dec. 04, 2014	May 18, 2015 ~ May 21, 2015	Dec. 03, 2015	Radiation (03CH11-HY)
Filter	Wainwright	WLKS4500-8S S	SN19	4.5G Low Pass	Oct. 01, 2014	May 18, 2015 ~ May 21, 2015	Sep. 30, 2015	Radiation (03CH11-HY)
Filter	Microwave Circuits	H07G18G3	SN8009-01	7GHz HPF	Oct. 01, 2014	May 18, 2015 ~ May 21, 2015	Sep. 30, 2015	Radiation (03CH11-HY)
Test Software	Audix	E3	Version 6.2009-8-24	N/A	N/A	May 18, 2015 ~ May 21, 2015	N/A	Radiation (03CH11-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% ($U = 2U_c(y)$)	4.80
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Appendix A. Conducted Test Results

Test Engineer:	Bill Kuo	Temperature:	24~26	°C
Test Date:	2015/05/12 ~ 2015/05/16	Relative Humidity:	45~49	%

TEST RESULTS DATA
26dB and 99% OBW

Band I										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	17.50	21.30	-	22.43		
11a	6Mbps	1	44	5220	17.65	21.35	-	22.47		
11a	6Mbps	1	48	5240	17.70	21.45	-	22.48		
HT20	MCS0	1	36	5180	18.50	22.00	-	22.67		
HT20	MCS0	1	44	5220	18.50	22.35	-	22.67		
HT20	MCS0	1	48	5240	18.50	21.80	-	22.67		
HT40	MCS0	1	38	5190	36.50	40.95	-	23.01		
HT40	MCS0	1	46	5230	36.70	41.58	-	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	6Mbps	1	36	5180	0.50	11.30	24.00	-7.00		Pass
11a	6Mbps	1	44	5220	0.50	11.21	24.00	-7.00		Pass
11a	6Mbps	1	48	5240	0.50	11.03	24.00	-7.00		Pass
HT20	MCS0	1	36	5180	0.53	11.30	24.00	-7.00		Pass
HT20	MCS0	1	44	5220	0.53	11.21	24.00	-7.00		Pass
HT20	MCS0	1	48	5240	0.53	11.25	24.00	-7.00		Pass
HT40	MCS0	1	38	5190	1.01	10.40	24.00	-7.00		Pass
HT40	MCS0	1	46	5230	1.01	11.46	24.00	-7.00		Pass

IC Band I										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	IC EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	36	5180	0.50	11.30	29.43	-7.00	22.43	Pass
11a	6Mbps	1	44	5220	0.50	11.21	29.47	-7.00	22.47	Pass
11a	6Mbps	1	48	5240	0.50	11.03	29.48	-7.00	22.48	Pass
HT20	MCS0	1	36	5180	0.53	11.30	29.67	-7.00	22.67	Pass
HT20	MCS0	1	44	5220	0.53	11.21	29.67	-7.00	22.67	Pass
HT20	MCS0	1	48	5240	0.53	11.25	29.67	-7.00	22.67	Pass
HT40	MCS0	1	38	5190	1.01	10.40	30.01	-7.00	23.01	Pass
HT40	MCS0	1	46	5230	1.01	11.46	30.01	-7.00	23.01	Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.50	0.24	11.00	-7.00		Pass
11a	6Mbps	1	44	5220	0.50	-0.55	11.00	-7.00		Pass
11a	6Mbps	1	48	5240	0.50	-0.48	11.00	-7.00		Pass
HT20	MCS0	1	36	5180	0.53	-0.26	11.00	-7.00		Pass
HT20	MCS0	1	44	5220	0.53	0.22	11.00	-7.00		Pass
HT20	MCS0	1	48	5240	0.53	-0.07	11.00	-7.00		Pass
HT40	MCS0	1	38	5190	1.01	-2.08	11.00	-7.00		Pass
HT40	MCS0	1	46	5230	1.01	-2.99	11.00	-7.00		Pass

IC Band I										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	IC EIRP PSD Limit (dBm/MHz)	Pass/Fail
11a	6Mbps	1	36	5180	0.50	0.24	17.00	-7.00	10	Pass
11a	6Mbps	1	44	5220	0.50	-0.55	17.00	-7.00	10	Pass
11a	6Mbps	1	48	5240	0.50	-0.48	17.00	-7.00	10	Pass
HT20	MCS0	1	36	5180	0.53	-0.26	17.00	-7.00	10	Pass
HT20	MCS0	1	44	5220	0.53	0.22	17.00	-7.00	10	Pass
HT20	MCS0	1	48	5240	0.53	-0.07	17.00	-7.00	10	Pass
HT40	MCS0	1	38	5190	1.01	-2.08	17.00	-7.00	10	Pass
HT40	MCS0	1	46	5230	1.01	-2.99	17.00	-7.00	10	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	6M bps	1	52	5260	17.65	21.35	23.47	29.47	23.98	
11a	6M bps	1	60	5300	17.7	21.4	23.48	29.48	23.98	
11a	6M bps	1	64	5320	17.65	21.4	23.47	29.47	23.98	
HT20	MCS 0	1	52	5260	18.45	21.85	23.66	29.66	23.98	
HT20	MCS 0	1	60	5300	18.5	21.85	23.67	29.67	23.98	
HT20	MCS 0	1	64	5320	18.4	21.9	23.65	29.65	23.98	
HT40	MCS 0	1	54	5270	36.6	41.22	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.5	41.67	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band II										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.50	11.29	23.98	-6.50		Pass
11a	6M bps	1	60	5300	0.50	11.06	23.98	-6.50		Pass
11a	6M bps	1	64	5320	0.50	11.07	23.98	-6.50		Pass
HT20	MCS 0	1	52	5260	0.53	11.44	23.98	-6.50		Pass
HT20	MCS 0	1	60	5300	0.53	11.41	23.98	-6.50		Pass
HT20	MCS 0	1	64	5320	0.53	11.40	23.98	-6.50		Pass
HT40	MCS 0	1	54	5270	1.01	11.41	23.98	-6.50		Pass
HT40	MCS 0	1	62	5310	1.01	10.83	23.98	-6.50		Pass

IC Band II										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	IC EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	52	5260	0.50	11.29	23.47	-6.50	29.47	Pass
11a	6M bps	1	60	5300	0.50	11.06	23.48	-6.50	29.48	Pass
11a	6M bps	1	64	5320	0.50	11.07	23.47	-6.50	29.47	Pass
HT20	MCS 0	1	52	5260	0.53	11.44	23.66	-6.50	29.66	Pass
HT20	MCS 0	1	60	5300	0.53	11.41	23.67	-6.50	29.67	Pass
HT20	MCS 0	1	64	5320	0.53	11.40	23.65	-6.50	29.65	Pass
HT40	MCS 0	1	54	5270	1.01	11.41	23.98	-6.50	30.00	Pass
HT40	MCS 0	1	62	5310	1.01	10.83	23.98	-6.50	30.00	Pass

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.50	0.35	11.00	-6.50		Pass
11a	6M bps	1	60	5300	0.50	-0.43	11.00	-6.50		Pass
11a	6M bps	1	64	5320	0.50	0.18	11.00	-6.50		Pass
HT20	MCS 0	1	52	5260	0.53	-0.05	11.00	-6.50		Pass
HT20	MCS 0	1	60	5300	0.53	-0.70	11.00	-6.50		Pass
HT20	MCS 0	1	64	5320	0.53	-0.58	11.00	-6.50		Pass
HT40	MCS 0	1	54	5270	1.01	-2.60	11.00	-6.50		Pass
HT40	MCS 0	1	62	5310	1.01	-3.13	11.00	-6.50		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
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	6M bps	1	100	5500	17.55	21.4	23.44	29.44	23.98	
11a	6M bps	1	116	5580	17.8	21.4	23.50	29.50	23.98	
11a	6M bps	1	140	5700	17.55	21.45	23.44	29.44	23.98	
HT20	MCS 0	1	100	5500	18.5	22.05	23.67	29.67	23.98	
HT20	MCS 0	1	116	5580	18.45	21.7	23.66	29.66	23.98	
HT20	MCS 0	1	140	5700	18.5	21.6	23.67	29.67	23.98	
HT40	MCS 0	1	102	5510	36.6	41.4	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.6	41.4	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.6	41.4	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band III										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.50	11.48	23.98	-7.00		Pass
11a	6M bps	1	116	5580	0.50	11.45	23.98	-7.00		Pass
11a	6M bps	1	140	5700	0.50	11.41	23.98	-7.00		Pass
HT20	MCS 0	1	100	5500	0.53	11.47	23.98	-7.00		Pass
HT20	MCS 0	1	116	5580	0.53	11.42	23.98	-7.00		Pass
HT20	MCS 0	1	140	5700	0.53	11.29	23.98	-7.00		Pass
HT40	MCS 0	1	102	5510	1.01	11.49	23.98	-7.00		Pass
HT40	MCS 0	1	110	5550	1.01	11.40	23.98	-7.00		Pass
HT40	MCS 0	1	134	5670	1.01	11.43	23.98	-7.00		Pass

IC Band III										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	IC EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	100	5500	0.50	11.48	23.44	-7.00	29.44	Pass
11a	6Mbps	1	116	5580	0.50	11.45	23.50	-7.00	29.50	Pass
11a	6Mbps	1	140	5700	0.50	11.41	23.44	-7.00	29.44	Pass
HT20	MCS0	1	100	5500	0.53	11.47	23.67	-7.00	29.67	Pass
HT20	MCS0	1	116	5580	0.53	11.42	23.66	-7.00	29.66	Pass
HT20	MCS0	1	140	5700	0.53	11.29	23.67	-7.00	29.67	Pass
HT40	MCS0	1	102	5510	1.01	11.49	23.98	-7.00	30.00	Pass
HT40	MCS0	1	110	5550	1.01	11.40	23.98	-7.00	30.00	Pass
HT40	MCS0	1	134	5670	1.01	11.43	23.98	-7.00	30.00	Pass

TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.50	0.13	11.00	-7.00		Pass
11a	6M bps	1	116	5580	0.50	0.30	11.00	-7.00		Pass
11a	6M bps	1	140	5700	0.50	-0.03	11.00	-7.00		Pass
HT20	MCS 0	1	100	5500	0.53	-0.24	11.00	-7.00		Pass
HT20	MCS 0	1	116	5580	0.53	0.05	11.00	-7.00		Pass
HT20	MCS 0	1	140	5700	0.53	-0.13	11.00	-7.00		Pass
HT40	MCS 0	1	102	5510	1.01	-2.44	11.00	-7.00		Pass
HT40	MCS 0	1	110	5550	1.01	-2.58	11.00	-7.00		Pass
HT40	MCS 0	1	134	5670	1.01	-3.16	11.00	-7.00		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	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.5	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	4.1	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.7	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	-30	3.7	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	50	3.7	

Band II										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.5	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	4.1	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.7	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	-30	3.7	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	50	3.7	

Band III										
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.5	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	4.1	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.7	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	-30	3.7	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	50	3.7	



Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang and Derreck Chen	Temperature :	22~23°C
		Relative Humidity :	46~48%

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		5132	55.2	-18.8	74	48.08	31.71	8.95	33.54	100	281	P	H
		5149.85	47.62	-6.38	54	40.49	31.72	8.95	33.54	100	281	A	H
	*	5180	107.4	-	-	100.22	31.75	8.97	33.54	100	281	P	H
	*	5180	99.95	-	-	92.77	31.75	8.97	33.54	100	281	A	H
													H
													H
		5135.9	52.05	-21.95	74	44.93	31.71	8.95	33.54	104	285	P	V
		5149.1	42.81	-11.19	54	35.68	31.72	8.95	33.54	104	285	A	V
	*	5180	100.8	-	-	93.62	31.75	8.97	33.54	104	285	P	V
	*	5180	93.61	-	-	86.43	31.75	8.97	33.54	104	285	A	V
													V
													V
802.11a CH 44 5220MHz		5140.4	54.1	-19.9	74	46.97	31.72	8.95	33.54	100	281	P	H
		5139.95	46.32	-7.68	54	39.19	31.72	8.95	33.54	100	281	A	H
	*	5220	107.54	-	-	100.33	31.77	8.98	33.54	100	281	P	H
	*	5220	100.34	-	-	93.13	31.77	8.98	33.54	100	281	A	H
		5352.09	51.17	-22.83	74	43.75	31.88	9.08	33.54	100	281	P	H
		5372.99	44.25	-9.75	54	36.77	31.89	9.13	33.54	100	281	A	H
		5137.7	50.78	-23.22	74	43.66	31.71	8.95	33.54	117	285	P	V
		5139.95	41.95	-12.05	54	34.82	31.72	8.95	33.54	117	285	A	V
	*	5220	100.45	-	-	93.24	31.77	8.98	33.54	117	285	P	V
	*	5220	93.99	-	-	86.78	31.77	8.98	33.54	117	285	A	V
		5449.33	49.06	-24.94	74	41.43	31.96	9.22	33.55	117	285	P	V
		5372.22	40.63	-13.37	54	33.15	31.89	9.13	33.54	117	285	A	V



802.11a CH 48 5240MHz	*	5240	108.02	-	-	100.79	31.79	8.98	33.54	100	281	P	H
	*	5240	100.89	-	-	93.66	31.79	8.98	33.54	100	281	A	H
		5392.46	52.22	-21.78	74	44.73	31.91	9.13	33.55	100	281	P	H
		5392.46	44.39	-9.61	54	36.9	31.91	9.13	33.55	100	281	A	H
													H
													H
	*	5240	100.89	-	-	93.66	31.79	8.98	33.54	109	284	P	V
	*	5240	94.42	-	-	87.19	31.79	8.98	33.54	109	284	A	V
		5350	49.47	-24.53	74	42.05	31.88	9.08	33.54	109	284	P	V
		5392.24	41.06	-12.94	54	33.57	31.91	9.13	33.55	109	284	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	46.24	-27.76	74	27.35	39.94	13.09	34.14	100	0	P	H
		15540	45.07	-28.93	74	25.97	38.33	16.55	35.78	100	0	P	H
													H
													H
		10360	45.71	-28.29	74	26.82	39.94	13.09	34.14	100	0	P	V
		15540	45.56	-28.44	74	26.46	38.33	16.55	35.78	100	0	P	V
													V
													V
802.11a CH 44 5220MHz		10440	47.03	-26.97	74	28.04	40.02	13.11	34.14	100	0	P	H
		15660	44.88	-29.12	74	26.03	38.09	16.56	35.8	100	0	P	H
													H
													H
		10440	46.9	-27.1	74	27.91	40.02	13.11	34.14	100	0	P	V
		15660	45.35	-28.65	74	26.5	38.09	16.56	35.8	100	0	P	V
													V
													V
802.11a CH 48 5240MHz		10480	46.73	-27.27	74	27.68	40.08	13.11	34.14	100	0	P	H
		15720	45.9	-28.1	74	27.18	37.95	16.57	35.8	100	0	P	H
													H
													H
		10480	47.35	-26.65	74	28.3	40.08	13.11	34.14	100	0	P	V
		15720	44.96	-29.04	74	26.24	37.95	16.57	35.8	100	0	P	V
													V
													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		5138.15	56.02	-17.98	74	48.9	31.71	8.95	33.54	252	277	P	H
		5149.85	47.6	-6.4	54	40.47	31.72	8.95	33.54	252	277	A	H
	*	5180	107.32	-	-	100.14	31.75	8.97	33.54	252	277	P	H
	*	5180	99.87	-	-	92.69	31.75	8.97	33.54	252	277	A	H
													H
													H
		5120.75	51.31	-22.69	74	44.24	31.69	8.92	33.54	100	286	P	V
		5149.25	42.84	-11.16	54	35.71	31.72	8.95	33.54	100	286	A	V
	*	5176	99.27	-	-	92.09	31.75	8.97	33.54	100	286	P	V
	*	5176	93.87	-	-	86.69	31.75	8.97	33.54	100	286	A	V
													V
													V
802.11n HT20 CH 44 5220MHz		5139.8	54.49	-19.51	74	47.36	31.72	8.95	33.54	253	275	P	H
		5139.95	46.2	-7.8	54	39.07	31.72	8.95	33.54	253	275	A	H
	*	5220	108.58	-	-	101.37	31.77	8.98	33.54	253	275	P	H
	*	5220	101.11	-	-	93.9	31.77	8.98	33.54	253	275	A	H
		5371.45	50.96	-23.04	74	43.48	31.89	9.13	33.54	253	275	P	H
		5371.89	44.49	-9.51	54	37.01	31.89	9.13	33.54	253	275	A	H
		5141.3	50.58	-23.42	74	43.45	31.72	8.95	33.54	100	285	P	V
		5140.1	42.03	-11.97	54	34.9	31.72	8.95	33.54	100	285	A	V
	*	5220	101.17	-	-	93.96	31.77	8.98	33.54	100	285	P	V
	*	5220	94.25	-	-	87.04	31.77	8.98	33.54	100	285	A	V
		5452.85	49.14	-24.86	74	41.51	31.96	9.22	33.55	100	285	P	V
		5372	40.86	-13.14	54	33.38	31.89	9.13	33.54	100	285	A	V



802.11n HT20 CH 48 5240MHz	*	5240	108	-	-	100.77	31.79	8.98	33.54	254	275	P	H
	*	5240	100.44	-	-	93.21	31.79	8.98	33.54	254	275	A	H
		5393.12	51.52	-22.48	74	44.03	31.91	9.13	33.55	254	275	P	H
		5392.02	44.03	-9.97	54	36.54	31.91	9.13	33.55	254	275	A	H
													H
													H
	*	5240	100.42	-	-	93.19	31.79	8.98	33.54	109	285	P	V
	*	5240	94.16	-	-	86.93	31.79	8.98	33.54	109	285	A	V
		5394.66	49.63	-24.37	74	42.13	31.92	9.13	33.55	109	285	P	V
		5392.02	40.99	-13.01	54	33.5	31.91	9.13	33.55	109	285	A	V
													V
													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		10360	46.62	-27.38	74	27.73	39.94	13.09	34.14	100	0	P	H
		15540	45.33	-28.67	74	26.23	38.33	16.55	35.78	100	0	P	H
													H
													H
		10360	46.19	-27.81	74	27.3	39.94	13.09	34.14	100	0	P	V
		15540	45.81	-28.19	74	26.71	38.33	16.55	35.78	100	0	P	V
													V
													V
802.11n HT20 CH 44 5220MHz		10440	46.43	-27.57	74	27.44	40.02	13.11	34.14	100	0	P	H
		15660	44.86	-29.14	74	26.01	38.09	16.56	35.8	100	0	P	H
													H
													H
		10440	45.92	-28.08	74	26.93	40.02	13.11	34.14	100	0	P	V
		15660	45.57	-28.43	74	26.72	38.09	16.56	35.8	100	0	P	V
													V
													V
802.11n HT20 CH 48 5240MHz		10480	46.27	-27.73	74	27.22	40.08	13.11	34.14	100	0	P	H
		15720	45.79	-28.21	74	27.07	37.95	16.57	35.8	100	0	P	H
													H
													H
		10480	47.35	-26.65	74	28.3	40.08	13.11	34.14	100	0	P	V
		15720	45.95	-28.05	74	27.23	37.95	16.57	35.8	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148.5	62.6	-11.4	74	55.47	31.72	8.95	33.54	100	289	P	H
		5148.8	50.45	-3.55	54	43.32	31.72	8.95	33.54	100	289	A	H
	*	5190	101.66	-	-	94.48	31.75	8.97	33.54	100	289	P	H
	*	5190	93.34	-	-	86.16	31.75	8.97	33.54	100	289	A	H
		5383.55	49.1	-24.9	74	41.61	31.91	9.13	33.55	100	289	P	H
		5367.93	39.99	-14.01	54	32.51	31.89	9.13	33.54	100	289	A	H
		5146.85	57.83	-16.17	74	50.7	31.72	8.95	33.54	100	166	P	V
		5149.55	47.17	-6.83	54	40.04	31.72	8.95	33.54	100	166	A	V
	*	5190	97.78	-	-	90.6	31.75	8.97	33.54	100	166	P	V
	*	5190	89.77	-	-	82.59	31.75	8.97	33.54	100	166	A	V
		5438.22	49.13	-24.87	74	41.56	31.95	9.17	33.55	100	166	P	V
		5365.95	39.3	-14.7	54	31.82	31.89	9.13	33.54	100	166	A	V
802.11n HT40 CH 46 5230MHz		5144.6	53.33	-20.67	74	46.2	31.72	8.95	33.54	100	280	P	H
		5150	44.93	-9.07	54	37.8	31.72	8.95	33.54	100	280	A	H
	*	5230	105.59	-	-	98.36	31.79	8.98	33.54	100	280	P	H
	*	5230	98.64	-	-	91.41	31.79	8.98	33.54	100	280	A	H
		5375.19	51.77	-22.23	74	44.3	31.89	9.13	33.55	100	280	P	H
		5376.29	45.02	-8.98	54	37.55	31.89	9.13	33.55	100	280	A	H
		5106.2	50.18	-23.82	74	43.1	31.69	8.92	33.53	107	285	P	V
		5082.2	41.27	-12.73	54	34.21	31.67	8.92	33.53	107	285	A	V
	*	5230	99.08	-	-	91.85	31.79	8.98	33.54	107	285	P	V
	*	5230	92.01	-	-	84.78	31.79	8.98	33.54	107	285	A	V
		5369.69	49.49	-24.51	74	42.01	31.89	9.13	33.54	107	285	P	V
		5377.17	41.64	-12.36	54	34.17	31.89	9.13	33.55	107	285	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		10380	46.76	-27.24	74	27.85	39.96	13.09	34.14	100	0	P	H
		15570	46.74	-27.26	74	27.72	38.26	16.55	35.79	100	0	P	H
													H
													H
		10380	47.45	-26.55	74	28.54	39.96	13.09	34.14	100	0	P	V
		15570	45.48	-28.52	74	26.46	38.26	16.55	35.79	100	0	P	V
													V
													V
802.11n HT40 CH 46 5230MHz		10460	47.32	-26.68	74	28.31	40.04	13.11	34.14	100	0	P	H
		15690	46.06	-27.94	74	27.28	38.02	16.56	35.8	100	0	P	H
													H
													H
		10460	46.85	-27.15	74	27.84	40.04	13.11	34.14	100	0	P	V
		15690	45.76	-28.24	74	26.98	38.02	16.56	35.8	100	0	P	V
													V
													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		5107.7	52.18	-21.82	74	45.1	31.69	8.92	33.53	100	282	P	H
		5107.25	44.12	-9.88	54	37.04	31.69	8.92	33.53	100	282	A	H
	*	5260	107.92	-	-	100.66	31.81	8.99	33.54	100	282	P	H
	*	5260	100.66	-	-	93.4	31.81	8.99	33.54	100	282	A	H
													H
													H
		5122.85	50.88	-23.12	74	43.76	31.71	8.95	33.54	118	283	P	V
		5107.55	40.94	-13.06	54	33.86	31.69	8.92	33.53	118	283	A	V
	*	5260	101.43	-	-	94.17	31.81	8.99	33.54	118	283	P	V
	*	5260	94.63	-	-	87.37	31.81	8.99	33.54	118	283	A	V
													V
													V
802.11a CH 60 5300MHz		5147.9	52.75	-21.25	74	45.62	31.72	8.95	33.54	103	282	P	H
		5147.75	44.43	-9.57	54	37.3	31.72	8.95	33.54	103	282	A	H
	*	5300	108.68	-	-	101.34	31.84	9.04	33.54	103	282	P	H
	*	5300	101.62	-	-	94.28	31.84	9.04	33.54	103	282	A	H
		5351.21	57.35	-16.65	74	49.93	31.88	9.08	33.54	103	282	P	H
		5350.44	47.37	-6.63	54	39.95	31.88	9.08	33.54	103	282	A	H
		5117.75	50.67	-23.33	74	43.59	31.69	8.92	33.53	102	284	P	V
		5147.75	40.83	-13.17	54	33.7	31.72	8.95	33.54	102	284	A	V
	*	5300	101.89	-	-	94.55	31.84	9.04	33.54	102	284	P	V
	*	5300	95.38	-	-	88.04	31.84	9.04	33.54	102	284	A	V
		5354.62	52.1	-21.9	74	44.68	31.88	9.08	33.54	102	284	P	V
		5351.1	42.91	-11.09	54	35.49	31.88	9.08	33.54	102	284	A	V



802.11a CH 64 5320MHz	*	5320	107.72	-	-	100.37	31.85	9.04	33.54	100	280	P	H
	*	5320	102.06	-	-	94.71	31.85	9.04	33.54	100	280	A	H
		5352.53	56.59	-17.41	74	49.17	31.88	9.08	33.54	100	280	P	H
		5353.3	48.69	-5.31	54	41.27	31.88	9.08	33.54	100	280	A	H
													H
													H
	*	5320	102.48	-	-	95.13	31.85	9.04	33.54	100	283	P	V
	*	5320	96.96	-	-	89.61	31.85	9.04	33.54	100	283	A	V
		5353.74	51.96	-22.04	74	44.54	31.88	9.08	33.54	100	283	P	V
		5353.19	44.09	-9.91	54	36.67	31.88	9.08	33.54	100	283	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	48.3	-25.7	74	29.19	40.11	13.14	34.14	100	0	P	H
		15780	45.96	-28.04	74	27.35	37.85	16.57	35.81	100	0	P	H
													H
													H
		10520	46.8	-27.2	74	27.69	40.11	13.14	34.14	100	0	P	V
		15780	45.72	-28.28	74	27.11	37.85	16.57	35.81	100	0	P	V
													V
													V
802.11a CH 60 5300MHz		10600	46.5	-27.5	74	27.32	40.16	13.2	34.18	100	0	P	H
		15900	45.49	-28.51	74	27.12	37.61	16.58	35.82	100	0	P	H
													H
													H
		10600	45.86	-28.14	74	26.68	40.16	13.2	34.18	100	0	P	V
		15900	46.25	-27.75	74	27.88	37.61	16.58	35.82	100	0	P	V
													V
													V
802.11a CH 64 5320MHz		10640	47.82	-26.18	74	28.62	40.18	13.23	34.21	100	0	P	H
		15960	43.87	-30.13	74	25.64	37.47	16.59	35.83	100	0	P	H
													H
													H
		10640	47.73	-26.27	74	28.53	40.18	13.23	34.21	100	0	P	V
		15960	44.5	-29.5	74	26.27	37.47	16.59	35.83	100	0	P	V
													V
													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		5148.8	52.24	-21.76	74	45.11	31.72	8.95	33.54	100	280	P	H
		5108.15	44.36	-9.64	54	37.28	31.69	8.92	33.53	100	280	A	H
	*	5260	107.93	-	-	100.67	31.81	8.99	33.54	100	280	P	H
	*	5260	101.03	-	-	93.77	31.81	8.99	33.54	100	280	A	H
													H
													H
		5023.4	49.94	-24.06	74	42.98	31.63	8.86	33.53	100	282	P	V
		5106.95	40.88	-13.12	54	33.8	31.69	8.92	33.53	100	282	A	V
	*	5260	101.13	-	-	93.87	31.81	8.99	33.54	100	282	P	V
	*	5260	94.37	-	-	87.11	31.81	8.99	33.54	100	282	A	V
													V
													V
802.11n HT20 CH 60 5300MHz		5145.2	50.39	-23.61	74	43.26	31.72	8.95	33.54	118	280	P	H
		5148.2	43.81	-10.19	54	36.68	31.72	8.95	33.54	118	280	A	H
	*	5300	108.34	-	-	101	31.84	9.04	33.54	118	280	P	H
	*	5300	101.36	-	-	94.02	31.84	9.04	33.54	118	280	A	H
		5354.07	55.64	-18.36	74	48.22	31.88	9.08	33.54	118	280	P	H
		5350.44	47.17	-6.83	54	39.75	31.88	9.08	33.54	118	280	A	H
		5087.6	50.71	-23.29	74	43.65	31.67	8.92	33.53	100	284	P	V
		5148.2	40.9	-13.1	54	33.77	31.72	8.95	33.54	100	284	A	V
	*	5300	101.23	-	-	93.89	31.84	9.04	33.54	100	284	P	V
	*	5300	94.77	-	-	87.43	31.84	9.04	33.54	100	284	A	V
		5351.21	51.13	-22.87	74	43.71	31.88	9.08	33.54	100	284	P	V
		5351.21	42.91	-11.09	54	35.49	31.88	9.08	33.54	100	284	A	V



802.11n HT20 CH 64 5320MHz	*	5320	107.39	-	-	100.04	31.85	9.04	33.54	100	279	P	H
	*	5320	100.51	-	-	93.16	31.85	9.04	33.54	100	279	A	H
		5355.83	57.3	-16.7	74	49.88	31.88	9.08	33.54	100	279	P	H
		5351.76	48.29	-5.71	54	40.87	31.88	9.08	33.54	100	279	A	H
													H
													H
	*	5320	101.79	-	-	94.44	31.85	9.04	33.54	100	284	P	V
	*	5320	94.44	-	-	87.09	31.85	9.04	33.54	100	284	A	V
		5352.42	51.59	-22.41	74	44.17	31.88	9.08	33.54	100	284	P	V
		5350.55	43.91	-10.09	54	36.49	31.88	9.08	33.54	100	284	A	V
													V
													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		10520	48.44	-25.56	74	29.33	40.11	13.14	34.14	100	0	P	H
		15780	45.92	-28.08	74	27.31	37.85	16.57	35.81	100	0	P	H
													H
													H
		10520	48.14	-25.86	74	29.03	40.11	13.14	34.14	100	0	P	V
		15780	46.54	-27.46	74	27.93	37.85	16.57	35.81	100	0	P	V
													V
													V
802.11n HT20 CH 60 5300MHz		10600	47.15	-26.85	74	27.97	40.16	13.2	34.18	100	0	P	H
		15900	45.89	-28.11	74	27.52	37.61	16.58	35.82	100	0	P	H
													H
													H
		10600	47.45	-26.55	74	28.27	40.16	13.2	34.18	100	0	P	V
		15900	45.92	-28.08	74	27.55	37.61	16.58	35.82	100	0	P	V
													V
													V
802.11n HT20 CH 64 5320MHz		10640	47.46	-26.54	74	28.26	40.18	13.23	34.21	100	0	P	H
		15960	44.79	-29.21	74	26.56	37.47	16.59	35.83	100	0	P	H
													H
													H
		10640	46.96	-27.04	74	27.76	40.18	13.23	34.21	100	0	P	V
		15960	44.84	-29.16	74	26.61	37.47	16.59	35.83	100	0	P	V
													V
													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		5124.35	52.43	-21.57	74	45.31	31.71	8.95	33.54	100	281	P	H
		5123.6	44.51	-9.49	54	37.39	31.71	8.95	33.54	100	281	A	H
	*	5270	104.4	-	-	97.14	31.81	8.99	33.54	100	281	P	H
	*	5270	97.63	-	-	90.37	31.81	8.99	33.54	100	281	A	H
		5367.38	52.86	-21.14	74	45.38	31.89	9.13	33.54	100	281	P	H
		5351.87	45.46	-8.54	54	38.04	31.88	9.08	33.54	100	281	A	H
		5124.5	50	-24	74	42.88	31.71	8.95	33.54	113	283	P	V
		5124.8	41.1	-12.9	54	33.98	31.71	8.95	33.54	113	283	A	V
	*	5270	98.37	-	-	91.11	31.81	8.99	33.54	113	283	P	V
	*	5270	91.28	-	-	84.02	31.81	8.99	33.54	113	283	A	V
		5353.74	49.68	-24.32	74	42.26	31.88	9.08	33.54	113	283	P	V
		5353.96	41.89	-12.11	54	34.47	31.88	9.08	33.54	113	283	A	V
802.11n HT40 CH 62 5310MHz		5101.7	50.72	-23.28	74	43.65	31.68	8.92	33.53	100	287	P	H
		5133.35	40.54	-13.46	54	33.42	31.71	8.95	33.54	100	287	A	H
	*	5310	100.27	-	-	92.92	31.85	9.04	33.54	100	287	P	H
	*	5310	93.41	-	-	86.06	31.85	9.04	33.54	100	287	A	H
		5350.77	62.93	-11.07	74	55.51	31.88	9.08	33.54	100	287	P	H
		5350.11	49.31	-4.69	54	41.89	31.88	9.08	33.54	100	287	A	H
		5032.7	49.42	-24.58	74	42.46	31.63	8.86	33.53	100	190	P	V
		5069	39.47	-14.53	54	32.46	31.65	8.89	33.53	100	190	A	V
	*	5310	96.68	-	-	89.33	31.85	9.04	33.54	100	190	P	V
	*	5310	89.15	-	-	81.8	31.85	9.04	33.54	100	190	A	V
		5350	57.79	-16.21	74	50.37	31.88	9.08	33.54	100	190	P	V
		5350	45.32	-8.68	54	37.9	31.88	9.08	33.54	100	190	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		10540	47.42	-26.58	74	28.31	40.12	13.14	34.15	100	0	P	H
		15810	45	-29	74	26.46	37.78	16.57	35.81	100	0	P	H
													H
													H
		10540	47.94	-26.06	74	28.83	40.12	13.14	34.15	100	0	P	V
		15810	46.65	-27.35	74	28.11	37.78	16.57	35.81	100	0	P	V
													V
													V
802.11n HT40 CH 62 5310MHz		10620	46.7	-27.3	74	27.52	40.17	13.2	34.19	100	0	P	H
		15930	44.93	-29.07	74	26.63	37.54	16.58	35.82	100	0	P	H
													H
													H
		10620	47.05	-26.95	74	27.87	40.17	13.2	34.19	100	0	P	V
		15930	44.51	-29.49	74	26.21	37.54	16.58	35.82	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	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 100 5500MHz		5469.68	56.43	-17.57	74	48.79	31.97	9.22	33.55	100	280	P	H
		5470	48.36	-5.64	54	40.72	31.97	9.22	33.55	100	280	A	H
	*	5500	107.01	-	-	99.3	32	9.26	33.55	100	280	P	H
	*	5500	100.03	-	-	92.32	32	9.26	33.55	100	280	A	H
													H
													H
		5425.2	52.44	-21.56	74	44.89	31.93	9.17	33.55	100	282	P	V
		5469.52	44.29	-9.71	54	36.65	31.97	9.22	33.55	100	282	A	V
	*	5500	102.22	-	-	94.51	32	9.26	33.55	100	282	P	V
	*	5500	94.98	-	-	87.27	32	9.26	33.55	100	282	A	V
													V
													V
802.11a CH 116 5580MHz		5430.48	52.44	-21.56	74	44.87	31.95	9.17	33.55	100	280	P	H
		5427.76	45.06	-8.94	54	37.51	31.93	9.17	33.55	100	280	A	H
	*	5580	107.37	-	-	99.54	32.1	9.32	33.59	100	280	P	H
	*	5580	100.61	-	-	92.78	32.1	9.32	33.59	100	280	A	H
		5733.64	50.3	-23.7	74	42.2	32.31	9.44	33.65	100	280	P	H
		5732.2	42.12	-11.88	54	34.02	32.31	9.44	33.65	100	280	A	H
		5444.24	49.11	-24.89	74	41.49	31.95	9.22	33.55	115	283	P	V
		5427.6	41.54	-12.46	54	33.99	31.93	9.17	33.55	115	283	A	V
	*	5580	101.44	-	-	93.61	32.1	9.32	33.59	115	283	P	V
	*	5580	94.72	-	-	86.89	32.1	9.32	33.59	115	283	A	V
		5753.64	48.71	-25.29	74	40.56	32.36	9.44	33.65	115	283	P	V
		5733.48	40.48	-13.52	54	32.38	32.31	9.44	33.65	115	283	A	V



802.11a CH 140 5700MHz	*	5699	105.68	-	-	97.65	32.27	9.39	33.63	100	276	P	H
	*	5699	98.61	-	-	90.58	32.27	9.39	33.63	100	276	A	H
		5733.08	54.07	-19.93	74	45.97	32.31	9.44	33.65	100	276	P	H
		5725	46.13	-7.87	54	38.02	32.31	9.44	33.64	100	276	A	H
													H
													H
	*	5700	100.24	-	-	92.21	32.27	9.39	33.63	100	280	P	V
	*	5700	93.04	-	-	85.01	32.27	9.39	33.63	100	280	A	V
		5741.48	51.1	-22.9	74	42.97	32.34	9.44	33.65	100	280	P	V
		5726.28	42.36	-11.64	54	34.25	32.31	9.44	33.64	100	280	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 100 5500MHz		11000	47.15	-26.85	74	27.66	40.4	13.48	34.39	100	0	P	H
		16500	46.66	-27.34	74	26.76	39	16.81	35.91	100	0	P	H
													H
													H
		11000	46.65	-27.35	74	27.16	40.4	13.48	34.39	100	0	P	V
		16500	46.32	-27.68	74	26.42	39	16.81	35.91	100	0	P	V
													V
													V
802.11a CH 116 5580MHz		11160	44.53	-29.47	74	25.11	40.27	13.64	34.49	100	0	P	H
		16740	47.67	-26.33	74	26.89	39.92	16.8	35.94	100	0	P	H
													H
													H
		11160	46.33	-27.67	74	26.91	40.27	13.64	34.49	100	0	P	V
		16740	47.94	-26.06	74	27.16	39.92	16.8	35.94	100	0	P	V
													V
													V
802.11a CH 140 5700MHz		11400	46.56	-27.44	74	27.27	40.08	13.87	34.66	100	0	P	H
		17100	49.64	-24.36	74	27.64	41.12	16.85	35.97	100	0	P	H
													H
													H
		11400	45.64	-28.36	74	26.35	40.08	13.87	34.66	100	0	P	V
		17100	48.52	-25.48	74	26.52	41.12	16.85	35.97	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		5467.12	56.36	-17.64	74	48.72	31.97	9.22	33.55	100	279	P	H
		5469.04	48.22	-5.78	54	40.58	31.97	9.22	33.55	100	279	A	H
	*	5500	107.11	-	-	99.4	32	9.26	33.55	100	279	P	H
	*	5500	100.11	-	-	92.4	32	9.26	33.55	100	279	A	H
													H
													H
		5470	51.94	-22.06	74	44.3	31.97	9.22	33.55	100	282	P	V
		5469.36	43.7	-10.3	54	36.06	31.97	9.22	33.55	100	282	A	V
	*	5500	101.31	-	-	93.6	32	9.26	33.55	100	282	P	V
	*	5500	94.26	-	-	86.55	32	9.26	33.55	100	282	A	V
													V
													V
802.11n HT20 CH 116 5580MHz		5428.24	51.81	-22.19	74	44.26	31.93	9.17	33.55	100	278	P	H
		5427.76	44.99	-9.01	54	37.44	31.93	9.17	33.55	100	278	A	H
	*	5580	106.93	-	-	99.1	32.1	9.32	33.59	100	278	P	H
	*	5580	99.91	-	-	92.08	32.1	9.32	33.59	100	278	A	H
		5747.88	50.07	-23.93	74	41.94	32.34	9.44	33.65	100	278	P	H
		5732.36	41.72	-12.28	54	33.62	32.31	9.44	33.65	100	278	A	H
		5451.28	49.37	-24.63	74	41.74	31.96	9.22	33.55	100	280	P	V
		5427.44	41.4	-12.6	54	33.85	31.93	9.17	33.55	100	280	A	V
	*	5580	100.66	-	-	92.83	32.1	9.32	33.59	100	280	P	V
	*	5580	94.24	-	-	86.41	32.1	9.32	33.59	100	280	A	V
		5749.88	48.83	-25.17	74	40.7	32.34	9.44	33.65	100	280	P	V
		5733.16	40.62	-13.38	54	32.52	32.31	9.44	33.65	100	280	A	V



802.11n HT20 CH 140 5700MHz	*	5700	105.25	-	-	97.22	32.27	9.39	9.39	100	278	P	H
	*	5700	98.55	-	-	90.52	32.27	9.39	9.39	100	278	A	H
		5725.48	58.65	-15.35	74	50.54	32.31	9.44	9.44	100	278	P	H
		5725	49.03	-4.97	54	40.92	32.31	9.44	9.44	100	278	A	H
													H
													H
	*	5700	99.69	-	-	91.66	32.27	9.39	9.39	100	278	P	V
	*	5700	92.98	-	-	84.95	32.27	9.39	9.39	100	278	A	V
		5725	52.82	-21.18	74	44.71	32.31	9.44	9.44	100	278	P	V
		5725	44.11	-9.89	54	36	32.31	9.44	9.44	100	278	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		11000	46.78	-27.22	74	27.29	40.4	13.48	34.39	100	0	P	H
		16500	47.71	-26.29	74	27.81	39	16.81	35.91	100	0	P	H
													H
													H
		11000	46.59	-27.41	74	27.1	40.4	13.48	34.39	100	0	P	V
		16500	47.65	-26.35	74	27.75	39	16.81	35.91	100	0	P	V
													V
													V
802.11n HT20 CH 116 5580MHz		11160	43.89	-30.11	74	24.47	40.27	13.64	34.49	100	0	P	H
		16740	48.19	-25.81	74	27.41	39.92	16.8	35.94	100	0	P	H
													H
													H
		11160	43.41	-30.59	74	23.99	40.27	13.64	34.49	100	0	P	V
		16740	47.94	-26.06	74	27.16	39.92	16.8	35.94	100	0	P	V
													V
													V
802.11n HT20 CH 140 5700MHz		11400	45.6	-28.4	74	26.31	40.08	13.87	34.66	100	0	P	H
		17100	50.05	-23.95	74	28.05	41.12	16.85	35.97	100	0	P	H
													H
													H
		11400	46.34	-27.66	74	27.05	40.08	13.87	34.66	100	0	P	V
		17100	49.13	-24.87	74	27.13	41.12	16.85	35.97	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5466.96	58.22	-15.78	74	50.58	31.97	9.22	33.55	100	286	P	H
		5468.66	50.73	-3.27	54	43.09	31.97	9.22	33.55	100	286	A	H
	*	5511	101.86	-	-	94.16	32	9.26	33.56	100	286	P	H
	*	5511	93.81	-	-	86.11	32	9.26	33.56	100	286	A	H
		5763.4	48.79	-25.21	74	40.59	32.36	9.49	33.65	100	286	P	H
		5725.4	40.43	-13.57	54	32.32	32.31	9.44	33.64	100	286	A	H
		5468.88	58.32	-15.68	74	50.68	31.97	9.22	33.55	100	194	P	V
		5469.2	45.44	-8.56	54	37.8	31.97	9.22	33.55	100	194	A	V
	*	5510	96.46	-	-	88.76	32	9.26	33.56	100	194	P	V
	*	5510	89.02	-	-	81.32	32	9.26	33.56	100	194	A	V
		5726.52	48.32	-25.68	74	40.21	32.31	9.44	33.64	100	194	P	V
		5740.36	40.34	-13.66	54	32.21	32.34	9.44	33.65	100	194	A	V
802.11n HT40 CH 110 5550MHz		5462	51.57	-22.43	74	43.94	31.96	9.22	33.55	100	284	P	H
		5468.24	43.36	-10.64	54	35.72	31.97	9.22	33.55	100	284	A	H
	*	5550	101.73	-	-	93.94	32.07	9.29	33.57	100	284	P	H
	*	5550	93.86	-	-	86.07	32.07	9.29	33.57	100	284	A	H
		5749.88	49.38	-24.62	74	41.25	32.34	9.44	33.65	100	284	P	H
		5733.64	40.66	-13.34	54	32.56	32.31	9.44	33.65	100	284	A	H
		5458.48	49.44	-24.56	74	41.81	31.96	9.22	33.55	100	289	P	V
		5466.8	41.78	-12.22	54	34.14	31.97	9.22	33.55	100	289	A	V
	*	5550	98.25	-	-	90.46	32.07	9.29	33.57	100	289	P	V
	*	5550	91.43	-	-	83.64	32.07	9.29	33.57	100	289	A	V
		5741.72	48.8	-25.2	74	40.67	32.34	9.44	33.65	100	289	P	V
		5727.64	40.51	-13.49	54	32.4	32.31	9.44	33.64	100	289	A	V



802.11n HT40 CH 134 5670MHz		5386.16	48.7	-25.3	74	41.21	31.91	9.13	33.55	100	294	P	H
		5465	41.04	-12.96	54	33.4	31.97	9.22	33.55	100	294	A	H
	*	5670	101.05	-	-	93.08	32.24	9.35	33.62	100	294	P	H
	*	5670	93.12	-	-	85.15	32.24	9.35	33.62	100	294	A	H
		5728	52.93	-21.07	74	44.82	32.31	9.44	33.64	100	294	P	H
		5725.24	42.81	-11.19	54	34.7	32.31	9.44	33.64	100	294	A	H
		5420.4	48.39	-25.61	74	40.84	31.93	9.17	33.55	100	279	P	V
		5449.2	40.45	-13.55	54	32.82	31.96	9.22	33.55	100	279	A	V
	*	5670	98.09	-	-	90.12	32.24	9.35	33.62	100	279	P	V
	*	5670	90.93	-	-	82.96	32.24	9.35	33.62	100	279	A	V
		5728.36	55.45	-18.55	74	47.34	32.31	9.44	33.64	100	279	P	V
		5733	42.4	-11.6	54	34.3	32.31	9.44	33.65	100	279	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11020	46.67	-27.33	74	27.21	40.39	13.48	34.41	100	0	P	H
		16530	46.43	-27.57	74	26.4	39.13	16.81	35.91	100	0	P	H
													H
													H
		11020	47.27	-26.73	74	27.81	40.39	13.48	34.41	100	0	P	V
		16530	46.67	-27.33	74	26.64	39.13	16.81	35.91	100	0	P	V
													V
													V
802.11n HT40 CH 110 5550MHz		11100	46.98	-27.02	74	27.56	40.32	13.56	34.46	100	0	P	H
		16650	47.5	-26.5	74	27.04	39.59	16.8	35.93	100	0	P	H
													H
													H
		11100	47.05	-26.95	74	27.63	40.32	13.56	34.46	100	0	P	V
		16650	48.58	-25.42	74	28.12	39.59	16.8	35.93	100	0	P	V
													V
													V
802.11n HT40 CH 134 5670MHz		11340	46.07	-27.93	74	26.76	40.13	13.79	34.61	100	0	P	H
		17010	49.15	-24.85	74	27.38	40.94	16.8	35.97	100	0	P	H
													H
													H
		11340	45.3	-28.7	74	25.99	40.13	13.79	34.61	100	0	P	V
		17010	48.96	-25.04	74	27.19	40.94	16.8	35.97	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

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		47.01	13.86	-26.14	40	35.74	8.89	1.04	31.81			P	H
		165	9.99	-33.51	43.5	31.03	9.1	1.64	31.78			P	H
		266.25	11.83	-34.17	46	28.96	12.7	1.94	31.77			P	H
		340.6	14.22	-31.78	46	30.01	13.82	2.17	31.78			P	H
		690.6	18.02	-27.98	46	28.02	18.9	3.14	32.04			P	H
		909	20.7	-25.3	46	28.41	20.1	3.55	31.36	121	25	P	H
													H
													H
													H
													H
													H
													H
		44.58	29.73	-10.27	40	50.76	10.11	0.67	31.81	212	199	P	V
		141.51	12.84	-30.66	43.5	32.65	10.51	1.46	31.78			P	V
		267.6	12.43	-33.57	46	29.67	12.59	1.94	31.77			P	V
		334.3	12.32	-33.68	46	28.23	13.69	2.17	31.77			P	V
		658.4	18.92	-27.08	46	28.92	19.02	3.02	32.04			P	V
		904.1	20.94	-25.06	46	28.69	20.1	3.55	31.4			P	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

WIFI 802.11n HT20 (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)
802.11n HT20 LF		81.57	18.31	-21.69	40	42.15	6.91	1.04	31.79	118	25	P	H
		176.88	14.75	-28.75	43.5	36.43	8.46	1.64	31.78			P	H
		250.86	14.6	-31.4	46	32.34	12.09	1.94	31.77			P	H
		342	12.46	-33.54	46	28.19	13.88	2.17	31.78			P	H
		639.5	18.38	-27.62	46	28.36	19.1	2.96	32.04			P	H
		890.8	20.96	-25.04	46	28.78	20.1	3.55	31.47			P	H
													H
													H
													H
													H
													H
													H
		97.5	14.02	-29.48	43.5	34.79	9.73	1.28	31.78			P	V
		162.57	7.64	-35.86	43.5	28.62	9.34	1.46	31.78			P	V
		229.53	8.7	-37.3	46	29.26	9.42	1.79	31.77			P	V
		349	13.44	-32.56	46	28.89	14.16	2.17	31.78			P	V
		701.8	18.44	-27.56	46	28.4	18.94	3.14	32.04			P	V
		906.9	21.53	-24.47	46	29.25	20.1	3.55	31.37	147	69	P	V
													V
													V
												V	
												V	
												V	
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

WIFI 802.11n HT40 (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)
802.11n HT40 LF		60.24	8.55	-31.45	40	34.13	5.18	1.04	31.8			P	H
		157.98	14.37	-29.13	43.5	35.01	9.68	1.46	31.78			P	H
		243.84	10.17	-35.83	46	28.91	11.24	1.79	31.77			P	H
		359.5	13.99	-32.01	46	28.92	14.68	2.17	31.78			P	H
		671.7	18.98	-27.02	46	29.1	18.9	3.02	32.04			P	H
		904.1	20.58	-25.42	46	28.33	20.1	3.55	31.4	102	32	P	H
													H
													H
													H
													H
													H
													H
		51.33	26.38	-13.62	40	49.91	7.23	1.04	31.8	299	319	P	V
		145.29	8.98	-34.52	43.5	29.02	10.28	1.46	31.78			P	V
		265.98	12.25	-33.75	46	29.36	12.72	1.94	31.77			P	V
		350.4	12.87	-33.13	46	28.26	14.22	2.17	31.78			P	V
		720	19.5	-26.5	46	28.88	19.5	3.14	32.02			P	V
		906.2	21.8	-24.2	46	29.53	20.1	3.55	31.38			P	V
													V
													V
												V	
												V	
												V	
												V	
												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	Peak or Average
H/V	Horizontal or Vertical



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”.