

FCC RF Test Report

APPLICANT : ASUSTeK COMPUTER INC.
EQUIPMENT : ASUS Tablet
BRAND NAME : ASUS
MODEL NAME : K00E
FCC ID : MSQK00E
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Jul. 11, 2013 and completely tested on Aug. 20, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant 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 Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC.

TEL : 886-3-327-3456

FAX : 886-3-328-4978

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TABLE OF CONTENTS

REVISION HISTORY..... 3

SUMMARY OF TEST RESULT 4

1 GENERAL DESCRIPTION 5

 1.1 Applicant 5

 1.2 Manufacturer 5

 1.3 Feature of Equipment Under Test 5

 1.4 Product Specification of Equipment Under Test 6

 1.5 Modification of EUT 6

 1.6 Testing Site 7

 1.7 Applied Standards 7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST 8

 2.1 Carrier Frequency Channel 8

 2.2 Pre-Scanned RF Power 9

 2.3 Test Mode 10

 2.4 Connection Diagram of Test System 12

 2.5 Support Unit used in test configuration and system 13

 2.6 EUT Operation Test Setup 13

 2.7 Measurement Results Explanation Example 13

3 TEST RESULT 14

 3.1 26dB & 99% Occupied Bandwidth Measurement 14

 3.2 Maximum Conducted Output Power Measurement 19

 3.3 Power Spectral Density Measurement 23

 3.4 Peak Excursion Ratio Measurement 27

 3.5 Unwanted Radiated Emission Measurement 30

 3.6 AC Conducted Emission Measurement 73

 3.7 Frequency Stability Measurement 77

 3.8 Automatically Discontinue Transmission 80

 3.9 Antenna Requirements 81

4 LIST OF MEASURING EQUIPMENTS..... 82

5 UNCERTAINTY OF EVALUATION 83

APPENDIX A. SETUP PHOTOGRAPHS



SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	RSS-210 A9.2	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	RSS-210 A9.2	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	RSS-210 A9.2	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.407(a)(6)	RSS-210 A9.3	Peak Excursion Ratio	≤ 13dB	Pass	-
3.5	15.407(b)	RSS-210 A9.3	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 4.81 dB at 5149.400 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 10.92 dB at 0.479 MHz
3.7	15.407(g)	-	Frequency Stability	Within Operation Band	Pass	-
3.8	15.407(c)	RSS-210 A9.4	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.9	15.203 & 15.407(a)	RSS-210 A9.2	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

ASUSTeK COMPUTER INC.

4F, No. 150, LI-TE RD., PEITOU, TAIPEI, TAIWAN

1.2 Manufacturer

WISTRON INFOCOMM (KUNSHAN) CO., LTD.

168# First Avenue, Kunshan Integrated Free Trade Zone, Kunshan, Jiangsu, China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	ASUS Tablet
Brand Name	ASUS
Model Name	K00E
FCC ID	MSQK00E
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA WLAN 11a/b/g/n HT20/HT40 Bluetooth v3.0
EUT Stage	Production Unit

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 : 8.52 dBm / 0.0071 W 802.11n HT20 : 8.53 dBm / 0.0071 W 802.11n HT40 : 8.71 dBm / 0.0074 W <5260 MHz ~ 5320 MHz> 802.11a : 9.09 dBm / 0.0081 W 802.11n HT20 : 8.99 dBm / 0.0079 W 802.11n HT40 : 9.39 dBm / 0.0087 W <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz> 802.11a : 10.75 dBm / 0.0119 W 802.11n HT20 : 10.64 dBm / 0.0116 W 802.11n HT40 : 10.91 dBm / 0.0123 W
99% Occupied Bandwidth	802.11a : 17.10 MHz 802.11n HT20 : 18.00 MHz 802.11n HT40 : 36.27 MHz
Antenna Type	<5180 MHz ~ 5240 MHz> PIFA Antenna with gain -0.25 dBi <5260 MHz ~ 5320 MHz> PIFA Antenna with gain 2.36 dBi <5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz > PIFA Antenna with gain 1.72 dBi
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.5 Modification of EUT

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

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

The test site complies with ANSI C63.4 2003 requirement.

1.7 Applied 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 D01 General UNII Test Procedures v01r03
- ♦ ANSI C63.4-2003

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



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	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	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	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 the highest power data rates 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)	10.75	10.74	10.70	10.74	10.69	10.74	10.73	10.74

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	10.64	10.58	10.62	10.56	10.60	10.53	10.52	10.62

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	10.91	10.89	10.89	10.85	10.73	10.86	10.82	10.79

2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

Test Cases				
	Test Items	Mode	Data rate	Test Channel
Conducted TCs	26dB and 99% BW Power Spectral Density	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Output Power	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Peak Excursion	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
	Frequency Stability	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	L/H
		802.11n HT20	6.5 Mbps	L/H
		802.11n HT40	13.5 Mbps	L/H
	Radiated Spurious Emission	802.11a	6 Mbps	L/M/H
		802.11n HT20	6.5 Mbps	L/M/H
		802.11n HT40	13.5 Mbps	L/M/H
AC Conducted Emission	Mode 1 : WCDMA Band II Link + Bluetooth Link + WLAN Link + Earphone + H-pattern + MP3 + USB Cable (Charging from Adapter 2)			



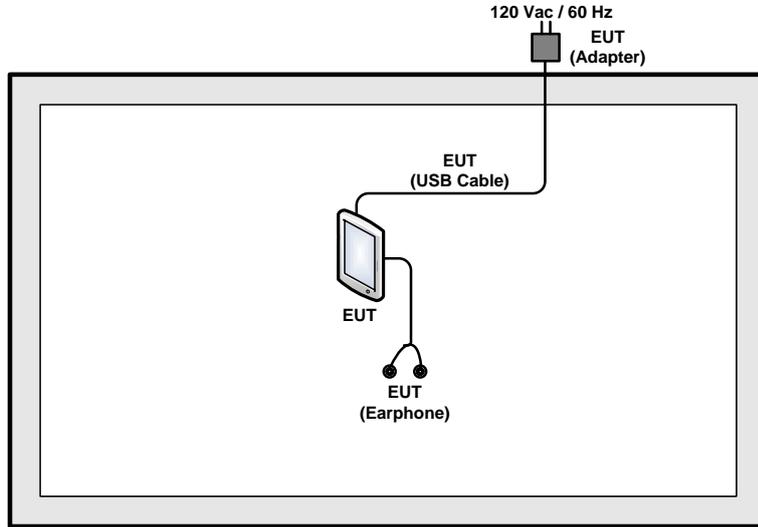
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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

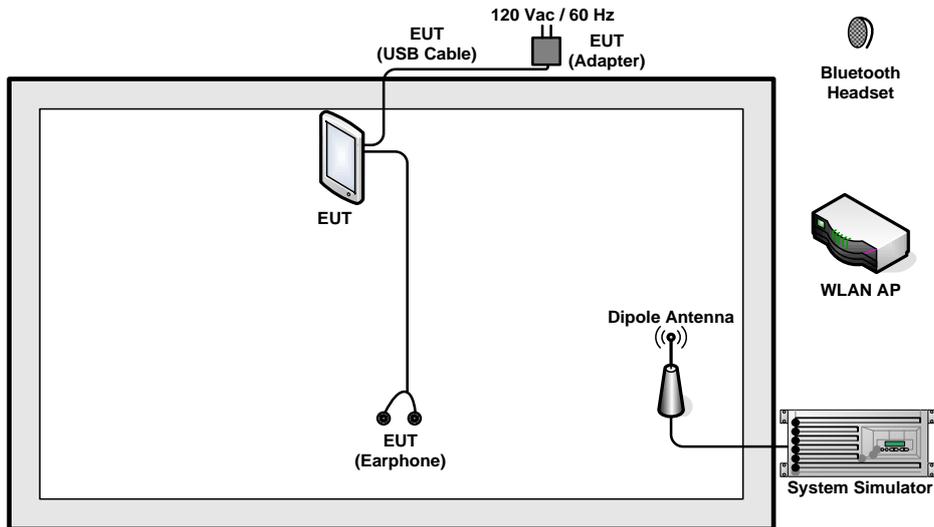
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<EUT with Adapter 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	R&S	CMU200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DNS-G120	FCC Doc	N/A	Unshielded, 1.8 m
3.	Bluetooth Headset	SONY	Z354	FCC Doc	N/A	N/A
4.	MicroSD Card	Transcend	8GB	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

The programmed RF utility “wifi_BT Test”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

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

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B).

For the band 5150-5250 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725MHz, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B.

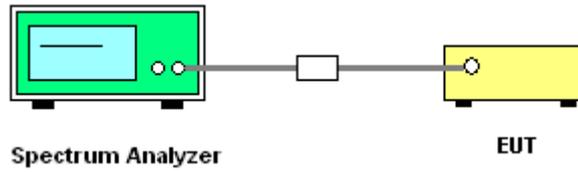
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.
Section D) 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) $\geq 3 * RBW$.
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

Test Band :	5GHz band 1	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	36	5180	17.00	18.95	22.30	16.78
11a	6Mbps	1	44	5220	17.00	19.10	22.30	16.81
11a	6Mbps	1	48	5240	17.10	19.10	22.33	16.81
HT20	MCS0	1	36	5180	18.00	19.45	22.55	16.89
HT20	MCS0	1	44	5220	18.00	19.55	22.55	16.91
HT20	MCS0	1	48	5240	17.95	19.45	22.54	16.89
HT40	MCS0	1	38	5190	36.27	40.86	23.00	17.00
HT40	MCS0	1	46	5230	36.18	40.86	23.00	17.00

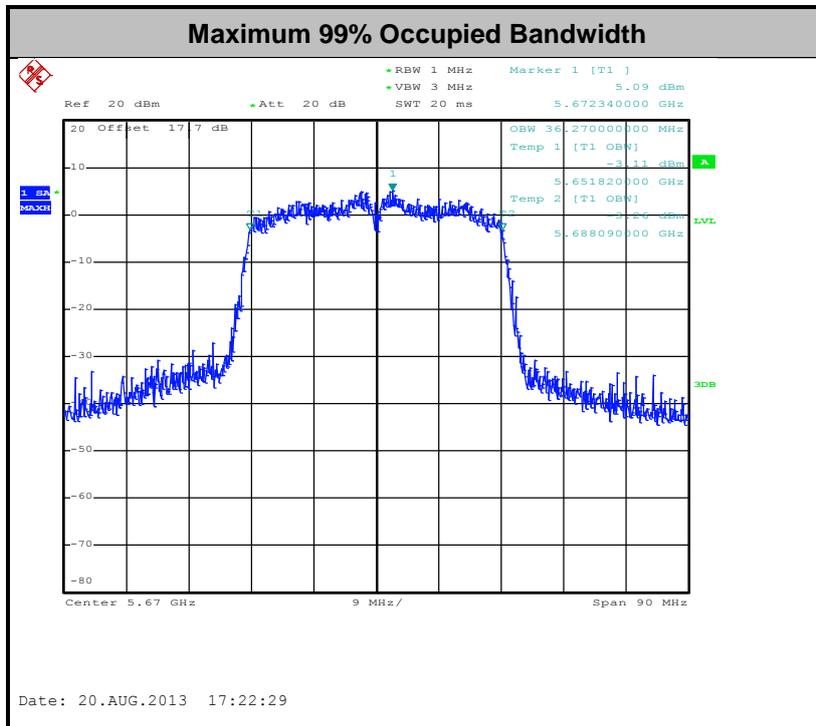
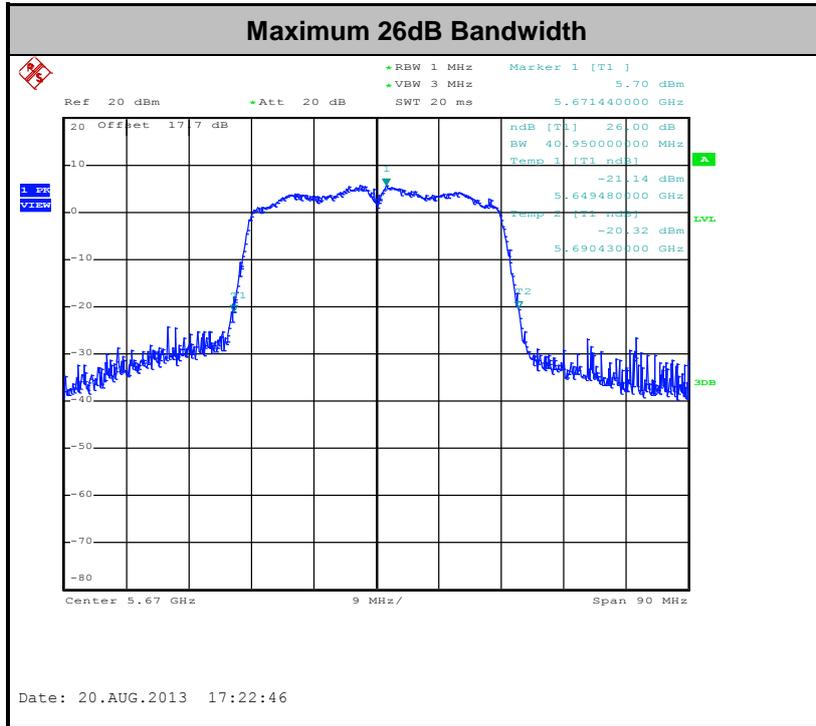
Test Band :	5GHz band 2	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (MHz)
11a	6Mbps	1	52	5260	17.00	19.10	29.30	23.81
11a	6Mbps	1	60	5300	16.95	19.15	29.29	23.82
11a	6Mbps	1	64	5320	17.00	19.05	29.30	23.80
HT20	MCS0	1	52	5260	18.00	19.40	29.55	23.88
HT20	MCS0	1	60	5300	17.95	19.50	29.54	23.90
HT20	MCS0	1	64	5320	18.00	19.35	29.55	23.87
HT40	MCS0	1	54	5270	36.18	40.86	30.00	24.00
HT40	MCS0	1	62	5310	36.18	40.77	30.00	24.00



Test Band :	5GHz band 3	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)	IC 99% Bandwidth EIRP Limit (dBm)	26dB Bandwidth Power Limit (MHz)
11a	6Mbps	1	100	5500	17.05	19.10	29.32	23.81
11a	6Mbps	1	116	5580	17.05	19.10	29.32	23.81
11a	6Mbps	1	140	5700	16.95	19.05	29.29	23.80
HT20	MCS0	1	100	5500	17.95	19.40	29.54	23.88
HT20	MCS0	1	116	5580	17.95	19.45	29.54	23.89
HT20	MCS0	1	140	5700	17.95	19.50	29.54	23.90
HT40	MCS0	1	102	5510	36.18	40.77	30.00	24.00
HT40	MCS0	1	110	5550	36.27	40.50	30.00	24.00
HT40	MCS0	1	134	5670	36.27	40.95	30.00	24.00



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5150-5250 MHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or $4 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz, bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

See list of measuring instruments of this test report.

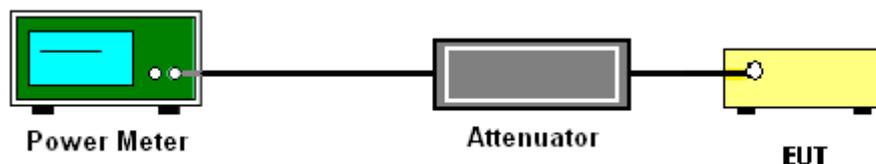
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r03.

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

Test Band :	5GHz band 1	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	36	5180	0.84	8.28	16.78	-0.25	Pass
11a	6Mbps	1	44	5220	0.84	8.52	16.81	-0.25	Pass
11a	6Mbps	1	48	5240	0.84	8.35	16.81	-0.25	Pass
HT20	MCS0	1	36	5180	0.90	8.14	16.89	-0.25	Pass
HT20	MCS0	1	44	5220	0.90	8.53	16.91	-0.25	Pass
HT20	MCS0	1	48	5240	0.90	8.39	16.89	-0.25	Pass
HT40	MCS0	1	38	5190	1.64	8.71	16.99	-0.25	Pass
HT40	MCS0	1	46	5230	1.64	8.69	16.99	-0.25	Pass

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	36	5180	0.84	8.28	22.55	-0.25	22.30	Pass
11a	6Mbps	1	44	5220	0.84	8.52	22.55	-0.25	22.30	Pass
11a	6Mbps	1	48	5240	0.84	8.35	22.58	-0.25	22.33	Pass
HT20	MCS0	1	36	5180	0.90	8.14	22.80	-0.25	22.55	Pass
HT20	MCS0	1	44	5220	0.90	8.53	22.80	-0.25	22.55	Pass
HT20	MCS0	1	48	5240	0.90	8.39	22.79	-0.25	22.54	Pass
HT40	MCS0	1	38	5190	1.64	8.71	23.26	-0.25	23.01	Pass
HT40	MCS0	1	46	5230	1.64	8.69	23.26	-0.25	23.01	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the band 5150-5250 MHz, the maximum average conducted output power shall not exceed lesser of 50 mW (17dBm) or 4 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.



Test Band :	5GHz band 2	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	52	5260	0.84	8.41	23.81	2.36	Pass
11a	6Mbps	1	60	5300	0.84	8.88	23.82	2.36	Pass
11a	6Mbps	1	64	5320	0.84	9.09	23.80	2.36	Pass
HT20	MCS0	1	52	5260	0.90	8.44	23.88	2.36	Pass
HT20	MCS0	1	60	5300	0.90	8.91	23.90	2.36	Pass
HT20	MCS0	1	64	5320	0.90	8.99	23.87	2.36	Pass
HT40	MCS0	1	54	5270	1.64	9.06	23.98	2.36	Pass
HT40	MCS0	1	62	5310	1.64	9.39	23.98	2.36	Pass

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	52	5260	0.84	8.41	23.30	2.36	29.30	Pass
11a	6Mbps	1	60	5300	0.84	8.88	23.29	2.36	29.29	Pass
11a	6Mbps	1	64	5320	0.84	9.09	23.30	2.36	29.30	Pass
HT20	MCS0	1	52	5260	0.90	8.44	23.55	2.36	29.55	Pass
HT20	MCS0	1	60	5300	0.90	8.91	23.54	2.36	29.54	Pass
HT20	MCS0	1	64	5320	0.90	8.99	23.55	2.36	29.55	Pass
HT40	MCS0	1	54	5270	1.64	9.06	23.98	2.36	30.00	Pass
HT40	MCS0	1	62	5310	1.64	9.39	23.98	2.36	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600MHz and 5650-5725MHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.



Test Band :	5GHz band 3	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	100	5500	0.84	10.75	23.81	1.72	Pass
11a	6Mbps	1	116	5580	0.84	10.60	23.81	1.72	Pass
11a	6Mbps	1	140	5700	0.84	10.33	23.80	1.72	Pass
HT20	MCS0	1	100	5500	0.90	10.64	23.88	1.72	Pass
HT20	MCS0	1	116	5580	0.90	10.58	23.89	1.72	Pass
HT20	MCS0	1	140	5700	0.90	10.23	23.90	1.72	Pass
HT40	MCS0	1	102	5510	1.64	10.91	23.98	1.72	Pass
HT40	MCS0	1	110	5550	1.64	10.90	23.98	1.72	Pass
HT40	MCS0	1	134	5670	1.64	10.65	23.98	1.72	Pass

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	IC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6Mbps	1	100	5500	0.84	10.75	23.32	1.72	29.32	Pass
11a	6Mbps	1	116	5580	0.84	10.60	23.32	1.72	29.32	Pass
11a	6Mbps	1	140	5700	0.84	10.33	23.29	1.72	29.29	Pass
HT20	MCS0	1	100	5500	0.90	10.64	23.54	1.72	29.54	Pass
HT20	MCS0	1	116	5580	0.90	10.58	23.54	1.72	29.54	Pass
HT20	MCS0	1	140	5700	0.90	10.23	23.54	1.72	29.54	Pass
HT40	MCS0	1	102	5510	1.64	10.91	23.98	1.72	30.00	Pass
HT40	MCS0	1	110	5550	1.64	10.90	23.98	1.72	30.00	Pass
HT40	MCS0	1	134	5670	1.64	10.65	23.98	1.72	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600MHz and 5650-5725MHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC and 99% OBW for IC.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5150-5250 MHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band.

For the bands 5250-5350 MHz and 5470-5600 and 5650-5725 MHz, the peak power spectral density shall not exceed 11 dBm in any 1-MHz band.

If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output 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.

3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section F) Peak power spectral density (PPSD).

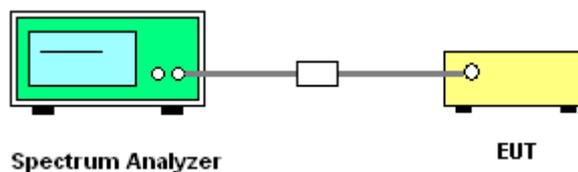
Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

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 = 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

Test Band :	5GHz band 1	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass/Fail
11a	6Mbps	1	36	5180	0.84	-1.94	4.00	-0.25	10	Pass
11a	6Mbps	1	44	5220	0.84	-1.98	4.00	-0.25	10	Pass
11a	6Mbps	1	48	5240	0.84	-2.11	4.00	-0.25	10	Pass
HT20	MCS0	1	36	5180	0.90	-2.35	4.00	-0.25	10	Pass
HT20	MCS0	1	44	5220	0.90	-2.28	4.00	-0.25	10	Pass
HT20	MCS0	1	48	5240	0.90	-2.22	4.00	-0.25	10	Pass
HT40	MCS0	1	38	5190	1.64	-4.46	4.00	-0.25	10	Pass
HT40	MCS0	1	46	5230	1.64	-4.62	4.00	-0.25	10	Pass

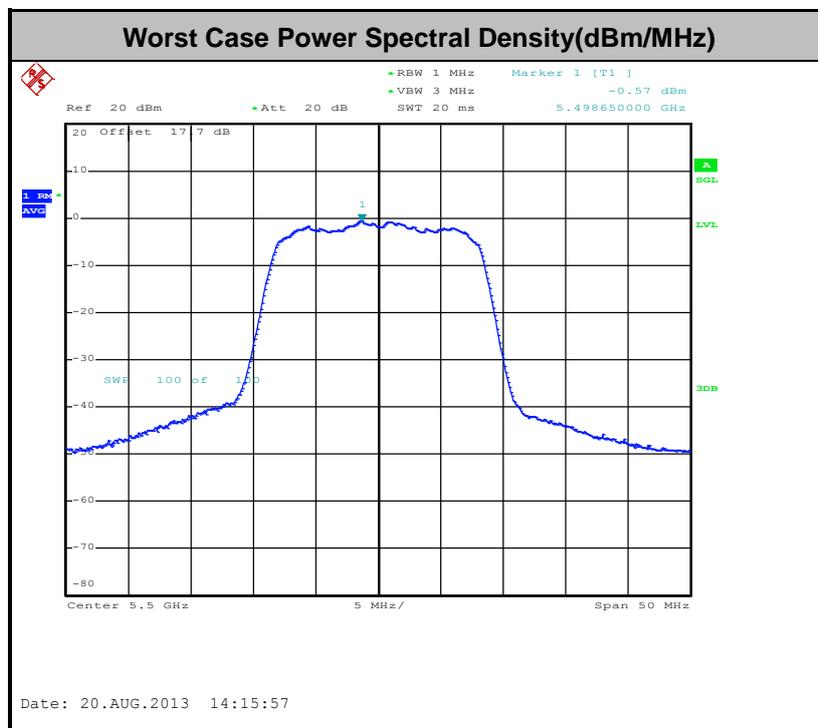
Test Band :	5GHz band 2	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	52	5260	0.84	-1.72	11.00	2.36	Pass
11a	6Mbps	1	60	5300	0.84	-1.63	11.00	2.36	Pass
11a	6Mbps	1	64	5320	0.84	-1.37	11.00	2.36	Pass
HT20	MCS0	1	52	5260	0.90	-2.23	11.00	2.36	Pass
HT20	MCS0	1	60	5300	0.90	-1.92	11.00	2.36	Pass
HT20	MCS0	1	64	5320	0.90	-1.94	11.00	2.36	Pass
HT40	MCS0	1	54	5270	1.64	-4.51	11.00	2.36	Pass
HT40	MCS0	1	62	5310	1.64	-4.16	11.00	2.36	Pass



Test Band :	5GHz band 3	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	100	5500	0.84	0.27	11.00	1.72	Pass
11a	6Mbps	1	116	5580	0.84	0.11	11.00	1.72	Pass
11a	6Mbps	1	140	5700	0.84	-0.01	11.00	1.72	Pass
HT20	MCS0	1	100	5500	0.90	-0.24	11.00	1.72	Pass
HT20	MCS0	1	116	5580	0.90	-0.48	11.00	1.72	Pass
HT20	MCS0	1	140	5700	0.90	-0.29	11.00	1.72	Pass
HT40	MCS0	1	102	5510	1.64	-2.33	11.00	1.72	Pass
HT40	MCS0	1	110	5550	1.64	-2.65	11.00	1.72	Pass
HT40	MCS0	1	134	5670	1.64	-2.70	11.00	1.72	Pass



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

3.4 Peak Excursion Ratio Measurement

3.4.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

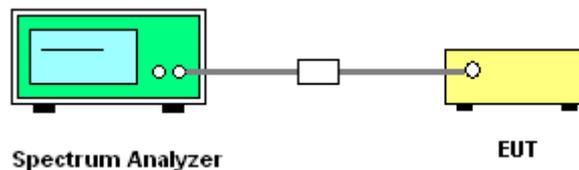
3.4.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section G) Peak excursion measurement

1. The transmitter output is connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emission bandwidth.
3. Find the maximum of the peak-max-hold spectrum.
 - *Set RBW = 1MHz.
 - *Set VBW \geq 3MHz.
 - *Detector = peak.
 - *Trace mode = max-hold.
 - *Allow the sweeps to continue until the trace stabilizes.
 - *Use the peak search function to find the peak of the spectrum.
4. Use the procedure found under section 3.3 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

3.4.4 Test Setup





3.4.5 Test Result of Peak Excursion Ratio

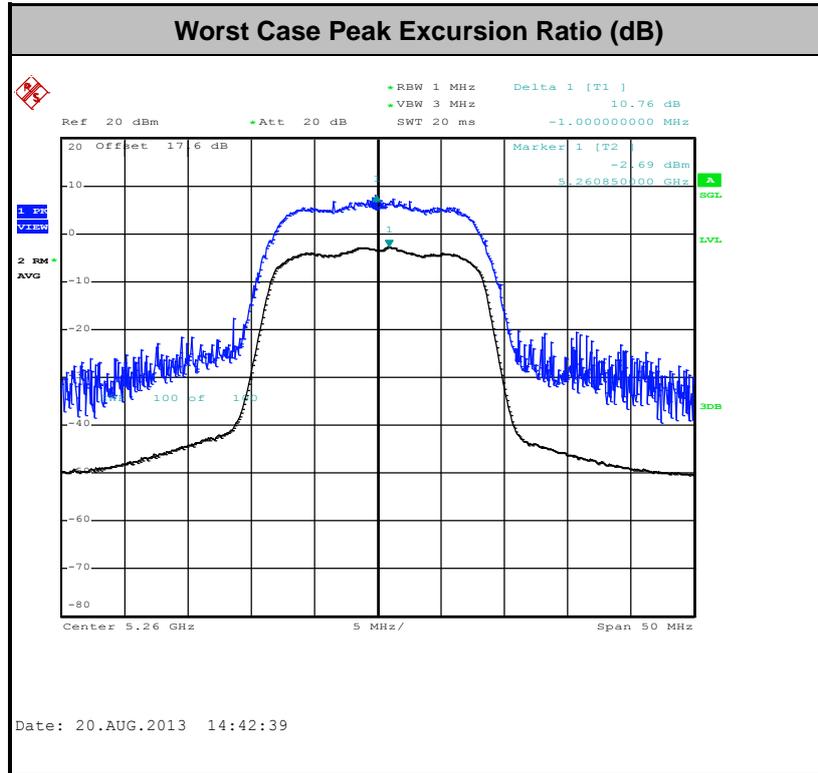
Test Band :	5GHz band 1,2,3	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	1	36	5180	9.53	9.88	9.17	8.92	-	13	Pass
HT20	1	36	5180	8.17	8.73	9.83	9.06	-	13	Pass
HT40	1	38	5230	8.38	8.97	8.15	8.67	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	1	52	5260	9.92	9.31	8.68	8.65	-	13	Pass
HT20	1	52	5260	8.83	8.72	8.95	8.41	-	13	Pass
HT40	1	54	5270	8.83	8.56	8.33	8.58	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	1	100	5500	9.34	9.41	9.59	8.39	-	13	Pass
HT20	1	100	5500	8.82	8.57	9.67	8.15	-	13	Pass
HT40	1	102	5510	8.62	8.54	8.68	9.15	-	13	Pass

Note: All modulation measured based on the minimum data rate setting.



Note: Peak Excursion Ratio (dB) = Peak – (Average + Duty Cycle Offset)
Duty Cycle Offset: 0.84 dB

3.5 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.

3.5.1 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.

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

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.

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03. Section H) 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
 - The setting follows the H) 5) of FCC KDB 789033.
 - RBW = 1 MHz
 - VBW ≥ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - The setting follows H) 6) of FCC KDB 789033.
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(μs)	1/T(kHz)	VBW Setting
802.11a	82.35	1400.00	0.71	1kHz
802.11n HT20	81.19	1312.00	0.76	1kHz
802.11n HT40	68.55	654.00	1.53	3kHz

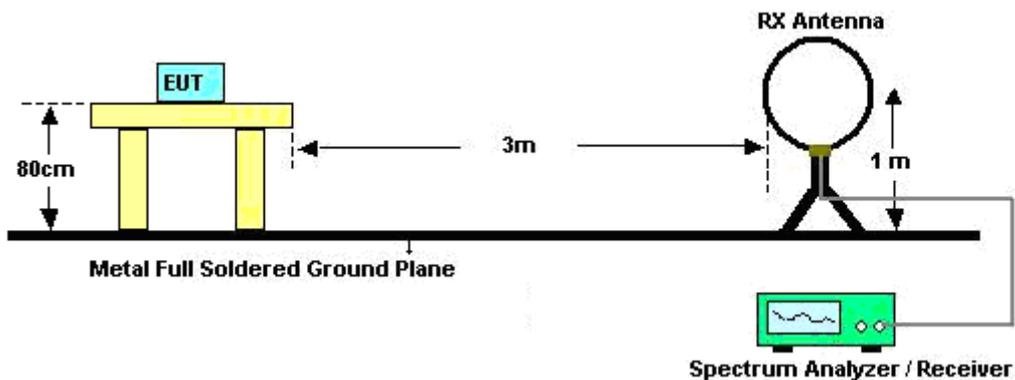
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters 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.

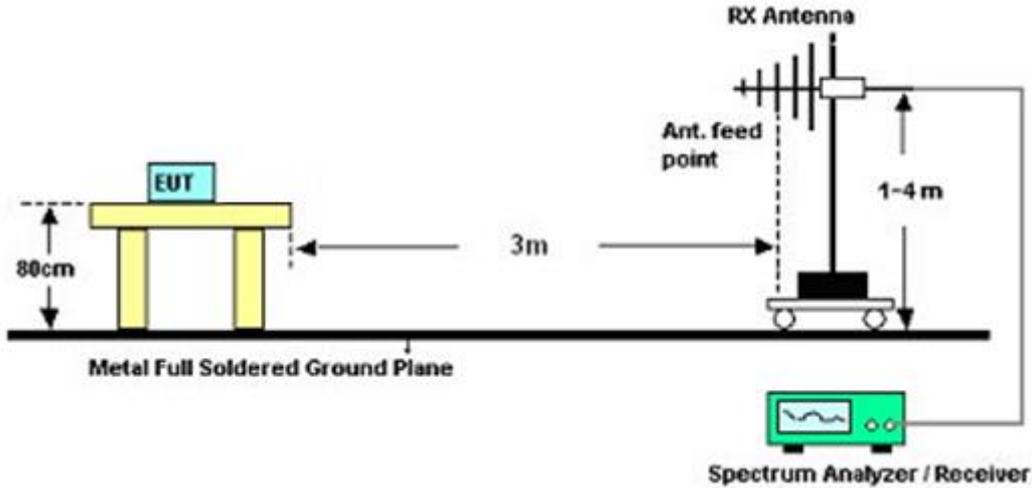
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level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

3.5.4 Test Setup

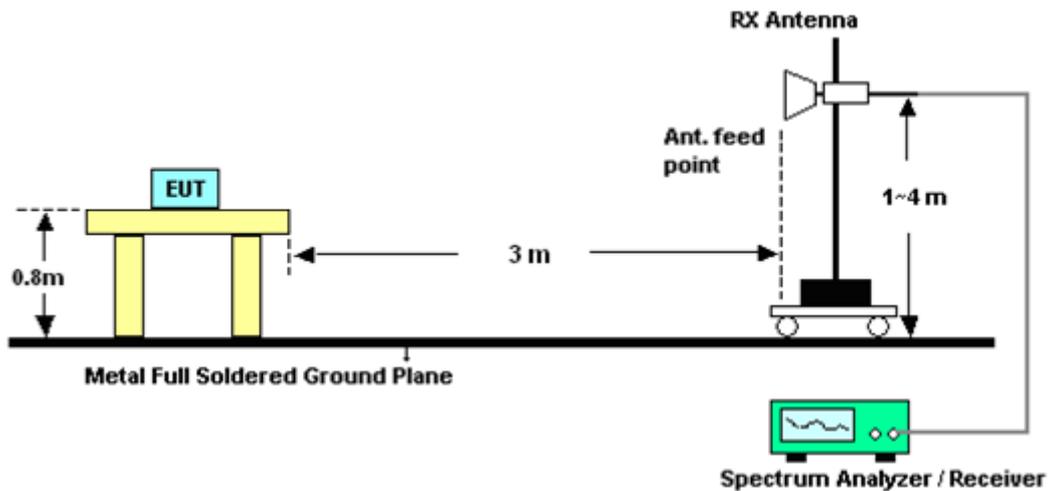
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 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.



3.5.6 Test Result

3.5.6.1 Test Result of Radiated Band Edges

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.4	69.19	-4.81	74	58.01	34.45	9.22	32.49	101	202	Peak
5149.1	46.34	-7.66	54	35.16	34.45	9.22	32.49	101	202	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.5	61.67	-12.33	74	50.49	34.45	9.22	32.49	188	184	Peak
5148.5	42.71	-11.29	54	31.53	34.45	9.22	32.49	188	184	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.55	53.88	-20.12	74	42.7	34.45	9.22	32.49	111	202	Peak
5138.15	41.66	-12.34	54	30.5	34.43	9.18	32.45	111	202	Average
5368.04	54.41	-19.59	74	43.31	34.67	9.61	33.18	111	202	Peak
5353.85	41.76	-12.24	54	30.73	34.65	9.56	33.18	111	202	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5050.25	54.82	-19.18	74	43.77	34.35	9.05	32.35	190	151	Peak
5030.9	41.27	-12.73	54	30.25	34.33	9.01	32.32	190	151	Average
5410.28	54.16	-19.84	74	43.16	34.7	9.69	33.39	190	151	Peak
5354.95	41.34	-12.66	54	30.31	34.65	9.56	33.18	190	151	Average



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.6	54.11	-19.89	74	42.93	34.45	9.22	32.49	111	199	Peak
5020.4	41.34	-12.66	54	30.33	34.32	9.01	32.32	111	199	Average
5352.75	54.95	-19.05	74	43.92	34.65	9.56	33.18	111	199	Peak
5350.88	42.05	-11.95	54	31.02	34.65	9.56	33.18	111	199	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5014.7	54.68	-19.32	74	43.68	34.32	8.97	32.29	186	183	Peak
5015.3	41.29	-12.71	54	30.29	34.32	8.97	32.29	186	183	Average
5371.23	54.3	-19.7	74	43.2	34.67	9.61	33.18	186	183	Peak
5352.75	41.42	-12.58	54	30.39	34.65	9.56	33.18	186	183	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5353.3	66.41	-7.59	74	55.38	34.65	9.56	33.18	110	196	Peak
5350	45.66	-8.34	54	34.63	34.65	9.56	33.18	110	196	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.21	67	-7	74	55.97	34.65	9.56	33.18	200	168	Peak
5350	43.71	-10.29	54	32.68	34.65	9.56	33.18	200	168	Average



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.68	66.52	-7.48	74	55.54	34.77	9.78	33.57	104	224	Peak
5466.8	44.31	-9.69	54	33.33	34.77	9.78	33.57	104	224	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5468.72	61.19	-12.81	74	50.21	34.77	9.78	33.57	104	358	Peak
5466.48	41.81	-12.19	54	30.83	34.77	9.78	33.57	104	358	Average

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.72	66.47	-7.53	74	55.51	35.07	10.04	34.15	100	230	Peak
5726.52	43.64	-10.36	54	32.68	35.07	10.04	34.15	100	230	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.48	63.54	-10.46	74	52.58	35.07	10.04	34.15	100	360	Peak
5725.08	42.04	-11.96	54	31.08	35.07	10.04	34.15	100	360	Average



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	66.87	-7.13	74	55.69	34.45	9.22	32.49	100	212	Peak
5150	45.47	-8.53	54	34.29	34.45	9.22	32.49	100	212	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.85	63.93	-10.07	74	52.75	34.45	9.22	32.49	172	186	Peak
5149.4	43.13	-10.87	54	31.95	34.45	9.22	32.49	172	186	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.85	55.3	-18.7	74	44.12	34.45	9.22	32.49	100	209	Peak
5149.85	41.62	-12.38	54	30.44	34.45	9.22	32.49	100	209	Average
5352.31	54.04	-19.96	74	43.01	34.65	9.56	33.18	100	209	Peak
5354.29	41.5	-12.5	54	30.47	34.65	9.56	33.18	100	209	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5080.7	54.26	-19.74	74	43.17	34.38	9.1	32.39	187	169	Peak
5006.75	41.2	-12.8	54	30.2	34.32	8.97	32.29	187	169	Average
5351.54	54.35	-19.65	74	43.32	34.65	9.56	33.18	187	169	Peak
5352.64	41.49	-12.51	54	30.46	34.65	9.56	33.18	187	169	Average



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5032.85	55.19	-18.81	74	44.17	34.33	9.01	32.32	100	188	Peak
5147	41.29	-12.71	54	30.11	34.45	9.22	32.49	100	188	Average
5358.58	56.46	-17.54	74	45.38	34.65	9.61	33.18	100	188	Peak
5350.88	41.78	-12.22	54	30.75	34.65	9.56	33.18	100	188	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5048.3	53.93	-20.07	74	42.88	34.35	9.05	32.35	185	186	Peak
5031.65	41.25	-12.75	54	30.23	34.33	9.01	32.32	185	186	Average
5382.78	54.52	-19.48	74	43.47	34.68	9.65	33.28	185	186	Peak
5353.08	41.44	-12.56	54	30.41	34.65	9.56	33.18	185	186	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.98	64.71	-9.29	74	53.68	34.65	9.56	33.18	100	181	Peak
5350.44	44.05	-9.95	54	33.02	34.65	9.56	33.18	100	181	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5350.55	63.44	-10.56	74	52.41	34.65	9.56	33.18	184	180	Peak
5350	43.81	-10.19	54	32.78	34.65	9.56	33.18	184	180	Average



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5468.88	65.4	-8.6	74	54.42	34.77	9.78	33.57	119	214	Peak
5469.68	42.87	-11.13	54	31.89	34.77	9.78	33.57	119	214	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5464.08	58.46	-15.54	74	47.48	34.77	9.78	33.57	100	339	Peak
5351.28	41.26	-12.74	54	30.23	34.65	9.56	33.18	100	339	Average

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.16	66.34	-7.66	74	55.38	35.07	10.04	34.15	100	232	Peak
5727.24	43.16	-10.84	54	32.2	35.07	10.04	34.15	100	232	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5727.08	62.96	-11.04	74	52	35.07	10.04	34.15	100	360	Peak
5725.48	42.07	-11.93	54	31.11	35.07	10.04	34.15	100	360	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.7	68.75	-5.25	74	57.57	34.45	9.22	32.49	100	206	Peak
5149.85	46.84	-7.16	54	35.66	34.45	9.22	32.49	100	206	Average
5439.43	53.09	-20.91	74	42.11	34.73	9.73	33.48	100	206	Peak
5418.09	41.79	-12.21	54	30.77	34.72	9.69	33.39	100	206	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.75	63.15	-10.85	74	51.97	34.45	9.22	32.49	187	174	Peak
5150	43.38	-10.62	54	32.2	34.45	9.22	32.49	187	174	Average
5433.05	54.3	-19.7	74	43.32	34.73	9.73	33.48	187	174	Peak
5357.37	41.57	-12.43	54	30.49	34.65	9.61	33.18	187	174	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.7	55.97	-18.03	74	44.79	34.45	9.22	32.49	100	207	Peak
5148.95	43.46	-10.54	54	32.28	34.45	9.22	32.49	100	207	Average
5376.51	53.53	-20.47	74	42.53	34.67	9.61	33.28	100	207	Peak
5351.43	41.91	-12.09	54	30.88	34.65	9.56	33.18	100	207	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5139.8	53.72	-20.28	74	42.54	34.45	9.18	32.45	170	177	Peak
5146.85	41.86	-12.14	54	30.68	34.45	9.22	32.49	170	177	Average
5359.35	53.79	-20.21	74	42.71	34.65	9.61	33.18	170	177	Peak
5350.99	41.8	-12.2	54	30.77	34.65	9.56	33.18	170	177	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5094.8	54.02	-19.98	74	42.9	34.4	9.14	32.42	100	202	Peak
5150	42	-12	54	30.82	34.45	9.22	32.49	100	202	Average
5353.41	56.4	-17.6	74	45.37	34.65	9.56	33.18	100	202	Peak
5350.22	42.72	-11.28	54	31.69	34.65	9.56	33.18	100	202	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5046.5	53.4	-20.6	74	42.35	34.35	9.05	32.35	186	179	Peak
5007.05	41.85	-12.15	54	30.85	34.32	8.97	32.29	186	179	Average
5411.93	54.49	-19.51	74	43.47	34.72	9.69	33.39	186	179	Peak
5350.77	42.27	-11.73	54	31.24	34.65	9.56	33.18	186	179	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5121.8	53.79	-20.21	74	42.64	34.42	9.18	32.45	100	196	Peak
5050.7	41.87	-12.13	54	30.82	34.35	9.05	32.35	100	196	Average
5350.66	67.38	-6.62	74	56.35	34.65	9.56	33.18	100	196	Peak
5351.87	44.41	-9.59	54	33.38	34.65	9.56	33.18	100	196	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5029.4	54.16	-19.84	74	43.14	34.33	9.01	32.32	200	178	Peak
5029.55	41.77	-12.23	54	30.75	34.33	9.01	32.32	200	178	Average
5350.99	66.04	-7.96	74	55.01	34.65	9.56	33.18	200	178	Peak
5350.11	43.93	-10.07	54	32.9	34.65	9.56	33.18	200	178	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5468.08	60.69	-13.31	74	49.71	34.77	9.78	33.57	102	300	Peak
5470	44.14	-9.86	54	33.16	34.77	9.78	33.57	102	300	Average
5746.2	53.37	-20.63	74	42.39	35.09	10.06	34.17	102	300	Peak
5757.48	41.41	-12.59	54	30.44	35.11	10.06	34.2	102	300	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.04	56.93	-17.07	74	45.95	34.77	9.78	33.57	100	345	Peak
5470	42.39	-11.61	54	31.41	34.77	9.78	33.57	100	345	Average
5763.4	53.28	-20.72	74	42.31	35.11	10.06	34.2	100	345	Peak
5726.12	41.32	-12.68	54	30.36	35.07	10.04	34.15	100	345	Average



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5366.64	53.56	-20.44	74	42.46	34.67	9.61	33.18	101	208	Peak
5353.36	41.71	-12.29	54	30.68	34.65	9.56	33.18	101	208	Average
5725	57.89	-16.11	74	46.93	35.07	10.04	34.15	101	208	Peak
5752.44	42.4	-11.6	54	31.4	35.11	10.06	34.17	101	208	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5366	53.65	-20.35	74	42.55	34.67	9.61	33.18	100	14	Peak
5355.28	41.8	-12.2	54	30.77	34.65	9.56	33.18	100	14	Average
5727.48	55.83	-18.17	74	44.87	35.07	10.04	34.15	100	14	Peak
5725.4	42.06	-11.94	54	31.1	35.07	10.04	34.15	100	14	Average



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

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
42.96	28.26	-11.74	40	47.12	11.7	0.64	31.2	100	51	Peak
158.79	29.72	-13.78	43.5	49.12	10.57	1.22	31.19	-	-	Peak
185.79	30.52	-12.98	43.5	51.31	8.96	1.27	31.02	-	-	Peak
316.8	24.42	-21.58	46	39.85	13.77	1.8	31	-	-	Peak
633.9	28.66	-17.34	46	36.33	20.07	2.79	30.53	-	-	Peak
845.3	28.05	-17.95	46	32.62	22.56	3.26	30.39	-	-	Peak
5180	96.73	-	-	85.5	34.48	9.27	32.52	101	202	Average
5180	107.52	-	-	96.29	34.48	9.27	32.52	101	202	Peak
10359	46.42	-27.58	74	53.86	37.72	13.71	58.87	100	0	Peak
15540	46.23	-27.77	74	48.05	40.11	15.56	57.49	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5180 MHz is fundamental signal which can be ignored. 2. 10359 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
35.4	29.67	-10.33	40	44.54	15.82	0.59	31.28	-	-	Peak
80.22	30.63	-9.37	40	53.23	7.7	0.88	31.18	100	111	Peak
159.87	29.98	-13.52	43.5	49.46	10.5	1.22	31.2	-	-	Peak
475	23.71	-22.29	46	34.56	17.58	2.37	30.8	-	-	Peak
580.7	27.91	-18.09	46	36.48	19.47	2.64	30.68	-	-	Peak
633.9	34.37	-11.63	46	42.04	20.07	2.79	30.53	-	-	Peak
5180	91.16	-	-	79.93	34.48	9.27	32.52	188	184	Average
5180	101.18	-	-	89.95	34.48	9.27	32.52	188	184	Peak
10359	49.96	-24.04	74	57.4	37.72	13.71	58.87	100	0	Peak
15540	48	-26	74	49.82	40.11	15.56	57.49	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. 10440 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	97.09	-	-	85.77	34.52	9.35	32.55	100	200	Average
5218	107.03	-	-	95.71	34.52	9.35	32.55	100	200	Peak
10440	46.04	-27.96	74	53.45	37.76	13.71	58.88	100	0	Peak
15660	47.74	-26.26	74	49.31	40.13	15.65	57.35	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. 10442 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	92.02	-	-	80.7	34.52	9.35	32.55	171	154	Average
5218	101.6	-	-	90.28	34.52	9.35	32.55	171	154	Peak
10442	40.63	-13.37	54	48.04	37.76	13.71	58.88	100	175	Average
10442	51.74	-22.26	74	59.15	37.76	13.71	58.88	100	175	Peak
15660	48.21	-25.79	74	49.78	40.13	15.65	57.35	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5240	97.23	-	-	85.96	34.53	9.39	32.65	111	202	Average
5240	106.75	-	-	95.48	34.53	9.39	32.65	111	202	Peak
10479	48.38	-25.62	74	55.76	37.79	13.72	58.89	100	0	Peak
15720	47.02	-26.98	74	48.46	40.14	15.69	57.27	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5240	92.92	-	-	81.65	34.53	9.39	32.65	190	151	Average
5240	102.45	-	-	91.18	34.53	9.39	32.65	190	151	Peak
10479	40.93	-13.07	54	48.31	37.79	13.72	58.89	122	179	Average
10479	52.01	-21.99	74	59.39	37.79	13.72	58.89	122	179	Peak
15720	47.45	-26.55	74	48.89	40.14	15.69	57.27	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5260 MHz is fundamental signal which can be ignored. 2. 10521 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5260	96.67	-	-	85.42	34.57	9.44	32.76	111	199	Average
5260	106.63	-	-	95.38	34.57	9.44	32.76	111	199	Peak
10521	46.16	-27.84	74	53.47	37.81	13.72	58.84	100	0	Peak
15780	47.65	-26.35	74	48.96	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5258 MHz is fundamental signal which can be ignored. 2. 10522 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	92.5	-	-	81.32	34.55	9.39	32.76	186	183	Average
5258	102.15	-	-	90.97	34.55	9.39	32.76	186	183	Peak
10522	41.87	-12.13	54	49.18	37.81	13.72	58.84	100	158	Average
10522	52.79	-21.21	74	60.1	37.81	13.72	58.84	100	158	Peak
15780	49.01	-24.99	74	50.32	40.16	15.75	57.22	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5298 MHz is fundamental signal which can be ignored. 2. 10599 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5298	96.4	-	-	85.29	34.6	9.48	32.97	124	201	Average
5298	106.52	-	-	95.41	34.6	9.48	32.97	124	201	Peak
10599	45.91	-28.09	74	52.95	37.84	13.73	58.61	100	0	Peak
15900	46.72	-27.28	74	47.78	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5302 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	93	-	-	81.89	34.6	9.48	32.97	200	184	Average
5302	101.73	-	-	90.62	34.6	9.48	32.97	200	184	Peak
10602	40.84	-13.16	54	47.88	37.84	13.73	58.61	100	58	Average
10602	51.55	-22.45	74	58.59	37.84	13.73	58.61	100	58	Peak
15900	49.41	-24.59	74	50.47	40.18	15.84	57.08	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	96.95	-	-	85.78	34.62	9.52	32.97	110	196	Average
5318	106.21	-	-	95.04	34.62	9.52	32.97	110	196	Peak
10641	45.85	-28.15	74	52.78	37.86	13.73	58.52	100	0	Peak
15960	47.66	-26.34	74	48.59	40.19	15.88	57	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	93	-	-	81.83	34.62	9.52	32.97	200	168	Average
5318	103.24	-	-	92.07	34.62	9.52	32.97	200	168	Peak
10642	41.94	-12.06	54	48.87	37.86	13.73	58.52	100	158	Average
10642	52.86	-21.14	74	59.79	37.86	13.73	58.52	100	158	Peak
15960	49.47	-24.53	74	50.4	40.19	15.88	57	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. 16500 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	96.21	-	-	85.29	34.8	9.86	33.74	104	224	Average
5502	107.23	-	-	96.31	34.8	9.86	33.74	104	224	Peak
11001	46.57	-27.43	74	52.37	38	13.76	57.56	100	0	Peak
16500	48.4	-25.6	74	46.84	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. 16500 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	89.58	-	-	78.66	34.8	9.86	33.74	104	358	Average
5502	100.68	-	-	89.76	34.8	9.86	33.74	104	358	Peak
10998	41.53	-12.47	54	47.33	38	13.76	57.56	100	133	Average
10998	52.59	-21.41	74	58.39	38	13.76	57.56	100	133	Peak
16500	49.4	-24.6	74	47.84	41.4	16.13	55.97	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5582 MHz is fundamental signal which can be ignored. 2. 16740 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	94.32	-	-	83.51	34.9	9.92	34.01	153	230	Average
5582	104.19	-	-	93.38	34.9	9.92	34.01	153	230	Peak
11160	46.9	-27.1	74	52.16	38.17	13.93	57.36	100	0	Peak
16740	48.69	-25.31	74	46.97	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5580 MHz is fundamental signal which can be ignored. 2. 16740 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5580	90.16	-	-	79.37	34.88	9.92	34.01	100	346	Average
5580	100.75	-	-	89.96	34.88	9.92	34.01	100	346	Peak
11162	41.3	-12.7	54	46.56	38.17	13.93	57.36	100	187	Average
11162	52.51	-21.49	74	57.77	38.17	13.93	57.36	100	187	Peak
16740	48.65	-25.35	74	46.93	41.54	16.23	56.05	100	0	Peak



Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5702 MHz is fundamental signal which can be ignored. 2. 17100 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	93.14	-	-	82.19	35.05	10.02	34.12	100	230	Average
5702	103.1	-	-	92.15	35.05	10.02	34.12	100	230	Peak
11400	46.67	-27.33	74	51.13	38.4	14.21	57.07	100	0	Peak
17100	47.98	-26.02	74	46.1	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11a	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5698 MHz is fundamental signal which can be ignored. 2. 17100 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5698	87.27	-	-	76.34	35.03	10.02	34.12	100	360	Average
5698	97.65	-	-	86.72	35.03	10.02	34.12	100	360	Peak
11400	40.66	-13.34	54	45.12	38.4	14.21	57.07	100	165	Average
11400	51.77	-22.23	74	56.23	38.4	14.21	57.07	100	165	Peak
17100	49.04	-24.96	74	47.16	41.58	16.46	56.16	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5178 MHz is fundamental signal which can be ignored. 2. 10359 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5178	95.09	-	-	83.86	34.48	9.27	32.52	100	212	Average
5178	105.49	-	-	94.26	34.48	9.27	32.52	100	212	Peak
10359	45.5	-28.5	74	52.94	37.72	13.71	58.87	100	0	Peak
15540	45.87	-28.13	74	47.69	40.11	15.56	57.49	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5178 MHz is fundamental signal which can be ignored. 2. 10358 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5178	90.91	-	-	79.68	34.48	9.27	32.52	172	186	Average
5178	101.23	-	-	90	34.48	9.27	32.52	172	186	Peak
10358	48.79	-25.21	74	56.23	37.71	13.71	58.86	100	0	Peak
15540	46.85	-27.15	74	48.67	40.11	15.56	57.49	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. 10440 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	95.53	-	-	84.21	34.52	9.35	32.55	100	212	Average
5218	105.66	-	-	94.34	34.52	9.35	32.55	100	212	Peak
10440	46.76	-27.24	74	54.17	37.76	13.71	58.88	100	0	Peak
15660	46.65	-27.35	74	48.22	40.13	15.65	57.35	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5218 MHz is fundamental signal which can be ignored. 2. 10440 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	92.19	-	-	80.87	34.52	9.35	32.55	170	186	Average
5218	104.22	-	-	92.9	34.52	9.35	32.55	170	186	Peak
10440	41.11	-12.89	54	48.52	37.76	13.71	58.88	100	33	Average
10440	51.65	-22.35	74	59.06	37.76	13.71	58.88	100	33	Peak
15660	47.27	-26.73	74	48.84	40.13	15.65	57.35	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5240 MHz is fundamental signal which can be ignored. 2. 10479 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5240	95.41	-	-	84.14	34.53	9.39	32.65	100	209	Average
5240	105.79	-	-	94.52	34.53	9.39	32.65	100	209	Peak
10479	46.45	-27.55	74	53.83	37.79	13.72	58.89	100	0	Peak
15720	45.72	-28.28	74	47.16	40.14	15.69	57.27	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5238 MHz is fundamental signal which can be ignored. 2. 10482 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5238	92.46	-	-	81.19	34.53	9.39	32.65	187	169	Average
5238	102.64	-	-	91.37	34.53	9.39	32.65	187	169	Peak
10482	50.97	-23.03	74	58.35	37.79	13.72	58.89	100	0	Peak
15720	47	-27	74	48.44	40.14	15.69	57.27	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5258 MHz is fundamental signal which can be ignored. 2. 10521 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	94.96	-	-	83.78	34.55	9.39	32.76	100	188	Average
5258	105.77	-	-	94.59	34.55	9.39	32.76	100	188	Peak
10521	45.96	-28.04	74	53.27	37.81	13.72	58.84	100	0	Peak
15780	46.55	-27.45	74	47.86	40.16	15.75	57.22	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5258 MHz is fundamental signal which can be ignored. 2. 10518 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5258	92.28	-	-	81.1	34.55	9.39	32.76	185	186	Average
5258	102.27	-	-	91.09	34.55	9.39	32.76	185	186	Peak
10518	50.14	-23.86	74	57.45	37.81	13.72	58.84	100	0	Peak
15780	46.74	-27.26	74	48.05	40.16	15.75	57.22	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5302 MHz is fundamental signal which can be ignored. 2. 10599 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	94.12	-	-	83.01	34.6	9.48	32.97	100	203	Average
5302	104.16	-	-	93.05	34.6	9.48	32.97	100	203	Peak
10599	45.37	-28.63	74	52.41	37.84	13.73	58.61	100	0	Peak
15900	46.96	-27.04	74	48.02	40.18	15.84	57.08	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5298 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5298	93.14	-	-	82.03	34.6	9.48	32.97	154	179	Average
5298	103.1	-	-	91.99	34.6	9.48	32.97	154	179	Peak
10602	49.65	-24.35	74	56.69	37.84	13.73	58.61	100	0	Peak
15900	47.73	-26.27	74	48.79	40.18	15.84	57.08	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	94.19	-	-	83.02	34.62	9.52	32.97	100	181	Average
5318	104.21	-	-	93.04	34.62	9.52	32.97	100	181	Peak
10641	45.22	-28.78	74	52.15	37.86	13.73	58.52	100	0	Peak
15960	47.18	-26.82	74	48.11	40.19	15.88	57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5320 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5320	93.38	-	-	82.21	34.62	9.52	32.97	184	180	Average
5320	103.7	-	-	92.53	34.62	9.52	32.97	184	180	Peak
10641	40.4	-13.6	54	47.33	37.86	13.73	58.52	100	177	Average
10641	51.49	-22.51	74	58.42	37.86	13.73	58.52	100	177	Peak
15960	46.81	-27.19	74	47.74	40.19	15.88	57	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5502 MHz is fundamental signal which can be ignored. 2. 16500 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	93.26	-	-	82.34	34.8	9.86	33.74	119	214	Average
5502	104.13	-	-	93.21	34.8	9.86	33.74	119	214	Peak
11001	46	-28	74	51.8	38	13.76	57.56	100	0	Peak
16500	47.65	-26.35	74	46.09	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5500 MHz is fundamental signal which can be ignored. 2. 16500 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5500	88.35	-	-	77.35	34.8	9.86	33.66	100	339	Average
5500	98.42	-	-	87.42	34.8	9.86	33.66	100	339	Peak
11002	50.64	-23.36	74	56.44	38	13.76	57.56	100	0	Peak
16500	47.85	-26.15	74	46.29	41.4	16.13	55.97	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5582 MHz is fundamental signal which can be ignored. 2. 16740 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	93.1	-	-	82.29	34.9	9.92	34.01	103	298	Average
5582	103.41	-	-	92.6	34.9	9.92	34.01	103	298	Peak
11160	45.5	-28.5	74	50.76	38.17	13.93	57.36	100	0	Peak
16740	48.69	-25.31	74	46.97	41.54	16.23	56.05	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5578 MHz is fundamental signal which can be ignored. 2. 16740 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5578	89.98	-	-	79.19	34.88	9.92	34.01	100	340	Average
5578	100.41	-	-	89.62	34.88	9.92	34.01	100	340	Peak
11162	42.97	-11.03	54	48.23	38.17	13.93	57.36	100	169	Average
11162	53.75	-20.25	74	59.01	38.17	13.93	57.36	100	169	Peak
16740	48.09	-25.91	74	46.37	41.54	16.23	56.05	100	0	Peak



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5702 MHz is fundamental signal which can be ignored. 2. 17100 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	91.6	-	-	80.65	35.05	10.02	34.12	100	232	Average
5702	101.63	-	-	90.68	35.05	10.02	34.12	100	232	Peak
11400	46.9	-27.1	74	51.36	38.4	14.21	57.07	100	0	Peak
17100	48.25	-25.75	74	46.37	41.58	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5702 MHz is fundamental signal which can be ignored. 2. 17100 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	88.15	-	-	77.2	35.05	10.02	34.12	100	360	Average
5702	98.49	-	-	87.54	35.05	10.02	34.12	100	360	Peak
11402	50.98	-23.02	74	55.44	38.4	14.21	57.07	100	0	Peak
17100	48.15	-25.85	74	46.27	41.58	16.46	56.16	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5190 MHz is fundamental signal which can be ignored. 10380 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5190	93.67	-	-	82.4	34.48	9.31	32.52	100	206	Average
5190	103.39	-	-	92.12	34.48	9.31	32.52	100	206	Peak
10380	44.9	-29.1	74	52.33	37.73	13.71	58.87	100	0	Peak
15570	46.7	-27.3	74	48.46	40.11	15.58	57.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5188 MHz is fundamental signal which can be ignored. 10378 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5188	89.84	-	-	78.61	34.48	9.27	32.52	187	174	Average
5188	99.54	-	-	88.31	34.48	9.27	32.52	187	174	Peak
10378	49.39	-24.61	74	56.82	37.73	13.71	58.87	100	0	Peak
15570	46.89	-27.11	74	48.65	40.11	15.58	57.45	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5228 MHz is fundamental signal which can be ignored. 2. 10461 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5228	92.68	-	-	81.45	34.53	9.35	32.65	100	207	Average
5228	102.35	-	-	91.12	34.53	9.35	32.65	100	207	Peak
10461	46.24	-27.76	74	53.62	37.78	13.72	58.88	100	0	Peak
15690	47.6	-26.4	74	49.1	40.14	15.67	57.31	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5232 MHz is fundamental signal which can be ignored. 2. 10461 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5232	90.48	-	-	79.25	34.53	9.35	32.65	170	177	Average
5232	100.33	-	-	89.1	34.53	9.35	32.65	170	177	Peak
10461	47.91	-26.09	74	55.29	37.78	13.72	58.88	100	0	Peak
15690	48.2	-25.8	74	49.7	40.14	15.67	57.31	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5272 MHz is fundamental signal which can be ignored. 10539 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5272	92.33	-	-	81.18	34.57	9.44	32.86	100	202	Average
5272	102.18	-	-	91.03	34.57	9.44	32.86	100	202	Peak
10539	44.75	-29.25	74	52.02	37.81	13.72	58.8	100	0	Peak
15810	46.61	-27.39	74	47.86	40.16	15.77	57.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5268 MHz is fundamental signal which can be ignored. 10538 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5268	89.26	-	-	78.01	34.57	9.44	32.76	186	179	Average
5268	99.28	-	-	88.03	34.57	9.44	32.76	186	179	Peak
10538	49.95	-24.05	74	57.22	37.81	13.72	58.8	100	0	Peak
15810	47.43	-26.57	74	48.68	40.16	15.77	57.18	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5312 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5312	92.83	-	-	81.66	34.62	9.52	32.97	100	196	Average
5312	102.71	-	-	91.54	34.62	9.52	32.97	100	196	Peak
10620	45.58	-28.42	74	52.57	37.85	13.73	58.57	100	0	Peak
15930	47.24	-26.76	74	48.23	40.19	15.86	57.04	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5308 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5308	91.37	-	-	80.22	34.6	9.52	32.97	200	178	Average
5308	101.22	-	-	90.07	34.6	9.52	32.97	200	178	Peak
10622	48.81	-25.19	74	55.8	37.85	13.73	58.57	100	0	Peak
15930	47.64	-26.36	74	48.63	40.19	15.86	57.04	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5508 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5508	89.52	-	-	78.6	34.8	9.86	33.74	102	300	Average
5508	99.42	-	-	88.5	34.8	9.86	33.74	102	300	Peak
11019	45.04	-28.96	74	50.8	38.02	13.76	57.54	100	0	Peak
16530	48.15	-25.85	74	46.57	41.42	16.14	55.98	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5512 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5512	86.07	-	-	75.15	34.8	9.86	33.74	100	345	Average
5512	96.31	-	-	85.39	34.8	9.86	33.74	100	345	Peak
11018	48.58	-25.42	74	54.34	38.02	13.76	57.54	100	0	Peak
16530	48.37	-25.63	74	46.79	41.42	16.14	55.98	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5552 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5552	89.97	-	-	79.13	34.86	9.9	33.92	102	298	Average
5552	99.94	-	-	89.1	34.86	9.9	33.92	102	298	Peak
11100	45.06	-28.94	74	50.53	38.1	13.87	57.44	100	0	Peak
16650	48.18	-25.82	74	46.52	41.49	16.19	56.02	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5552 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5552	87.73	-	-	76.89	34.86	9.9	33.92	100	345	Average
5552	98.08	-	-	87.24	34.86	9.9	33.92	100	345	Peak
11100	48.95	-25.05	74	54.42	38.1	13.87	57.44	100	0	Peak
16650	48.31	-25.69	74	46.65	41.49	16.19	56.02	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Horizontal
Remark :	1. 5672 MHz is fundamental signal which can be ignored. 2. 17010 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5672	89.92	-	-	79	35.01	10	34.09	101	208	Average
5672	100	-	-	89.08	35.01	10	34.09	101	208	Peak
11340	45.35	-28.65	74	50.01	38.33	14.16	57.15	100	0	Peak
17010	47.97	-26.03	74	46.08	41.68	16.34	56.13	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	Eric Shih	Polarization :	Vertical
Remark :	1. 5672 MHz is fundamental signal which can be ignored. 2. 17010 MHz is not within a restricted band and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5672	87.06	-	-	76.14	35.01	10	34.09	100	14	Average
5672	96.17	-	-	85.25	35.01	10	34.09	100	14	Peak
11342	49.62	-24.38	74	54.28	38.33	14.16	57.15	100	0	Peak
17010	48.82	-25.18	74	46.93	41.68	16.34	56.13	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 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.

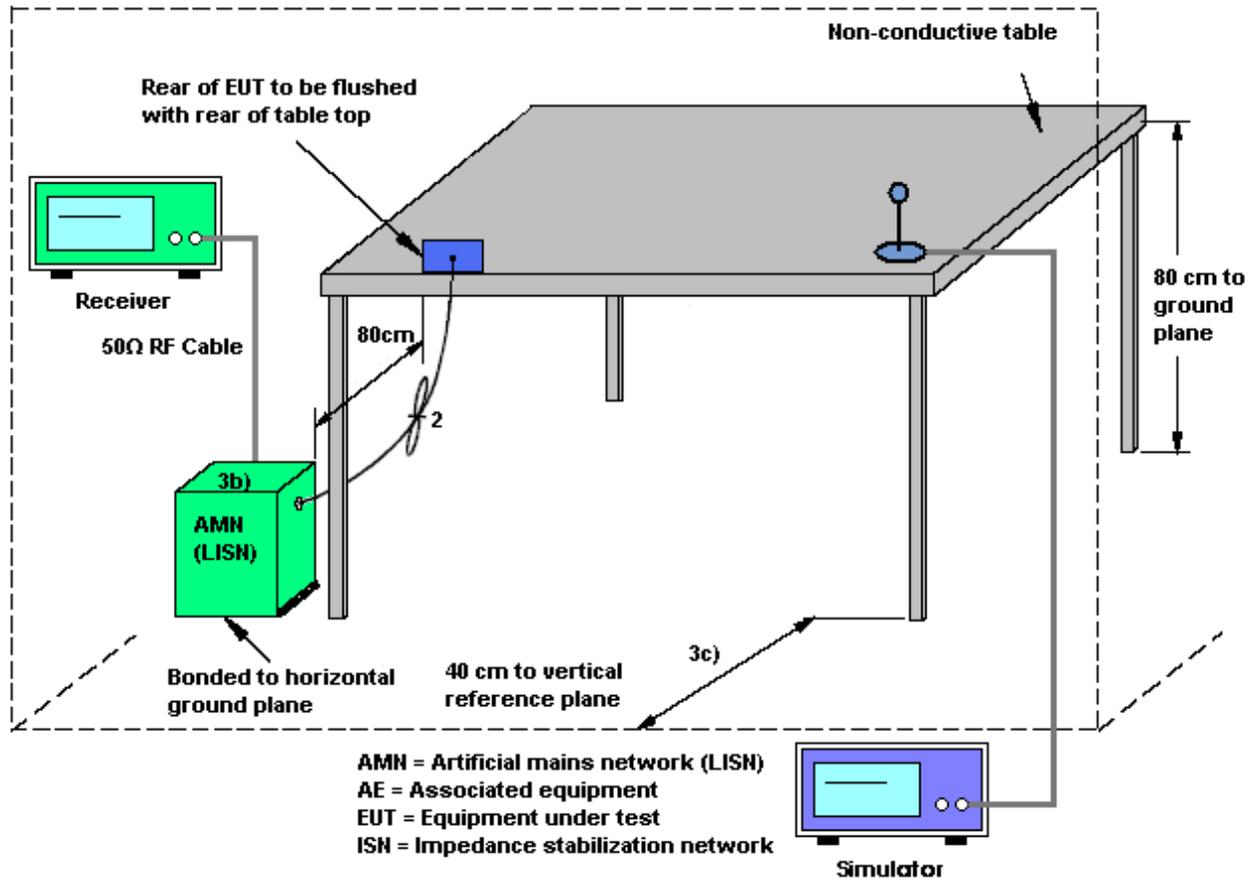
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 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.

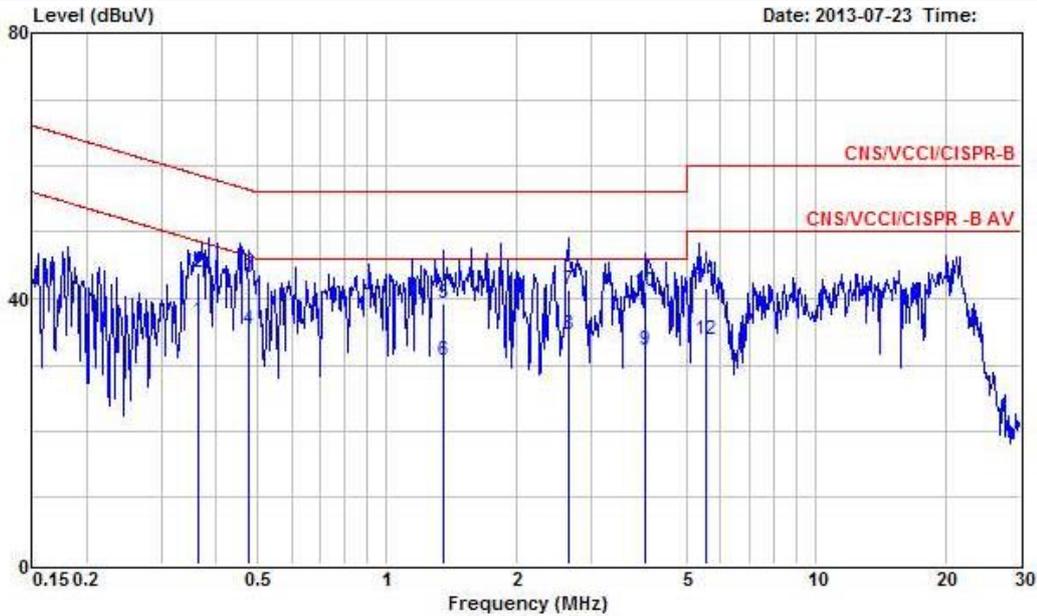
3.6.4 Test Setup





3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	David Du	Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WCDMA Band II Link + Bluetooth Link + WLAN Link + Earphone + H-pattern + MP3 + USB Cable (Charging from Adapter 2)		

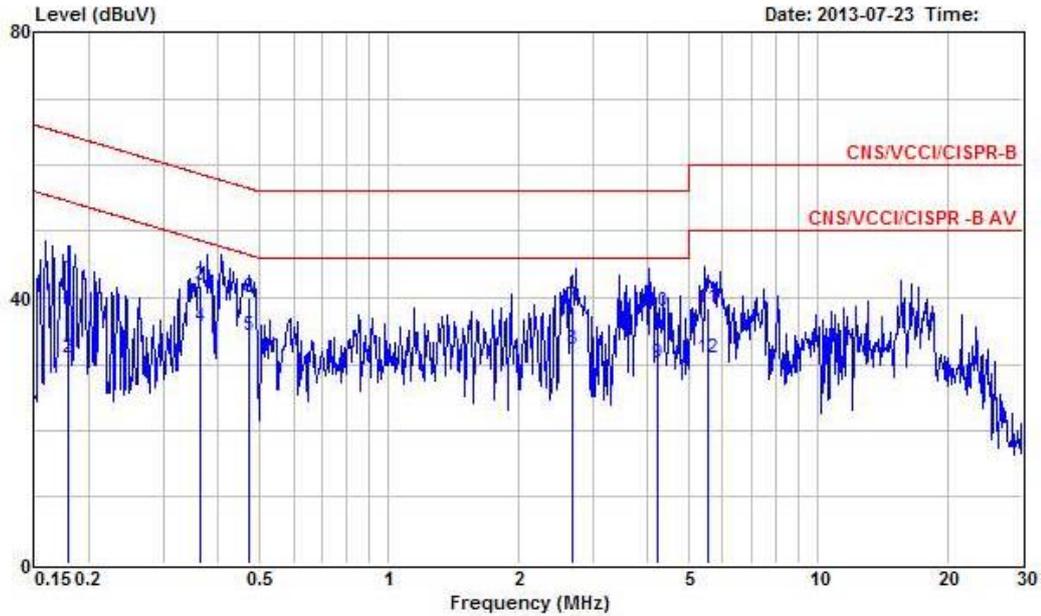


Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B LISN 2001/004-121228 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.363	36.56	-12.10	48.66	36.05	0.15	0.36	Average
2	0.363	44.02	-14.64	58.66	43.51	0.15	0.36	QP
3	0.479	43.00	-13.36	56.36	42.51	0.15	0.34	QP
4	0.479	35.44	-10.92	46.36	34.95	0.15	0.34	Average
5	1.360	39.25	-16.75	56.00	38.97	0.18	0.10	QP
6	1.360	30.71	-15.29	46.00	30.43	0.18	0.10	Average
7	2.650	41.42	-14.58	56.00	41.11	0.21	0.10	QP
8	2.650	34.66	-11.34	46.00	34.35	0.21	0.10	Average
9	3.990	32.17	-13.83	46.00	31.84	0.23	0.10	Average
10	3.990	40.95	-15.05	56.00	40.62	0.23	0.10	QP
11	5.560	41.50	-18.50	60.00	41.14	0.26	0.10	QP
12	5.560	33.85	-16.15	50.00	33.49	0.26	0.10	Average



Test Mode :	Mode 1	Temperature :	24~25°C
Test Engineer :	David Du	Relative Humidity :	59~60%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band II Link + Bluetooth Link + WLAN Link + Earphone + H-pattern + MP3 + USB Cable (Charging from Adapter 2)		



Site : C001-HY
 Condition : CNS/VCCI/CISPR-B LISN 2001/004-121228 NEUTRAL

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.179	42.85	-21.68	64.53	42.65	0.10	0.10	QP
2	0.179	30.97	-23.56	54.53	30.77	0.10	0.10	Average
3	0.365	41.85	-16.76	58.61	41.37	0.12	0.36	QP
4	0.365	35.64	-12.97	48.61	35.16	0.12	0.36	Average
5	0.474	34.30	-12.14	46.44	33.84	0.12	0.34	Average
6	0.474	39.97	-16.47	56.44	39.51	0.12	0.34	QP
7	2.680	38.70	-17.30	56.00	38.41	0.19	0.10	QP
8	2.680	32.21	-13.79	46.00	31.92	0.19	0.10	Average
9	4.235	30.07	-15.93	46.00	29.75	0.22	0.10	Average
10	4.235	37.82	-18.18	56.00	37.50	0.22	0.10	QP
11	5.565	38.54	-21.46	60.00	38.19	0.25	0.10	QP
12	5.565	31.00	-19.00	50.00	30.65	0.25	0.10	Average

3.7 Frequency Stability Measurement

3.7.1 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.

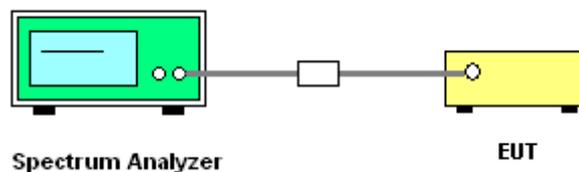
3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

3.7.3 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.

3.7.4 Test Setup





3.7.5 Test Result of Frequency Stability

Test Band :	5GHz band 1,2,3	Temperature :	24~26°C
Test Engineer :	Coyote Lin	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Frequency (MHz)	Low Frequency (MHz)	High Frequency (MHz)	Center Frequency (MHz)	Frequency Stability (ppm)
11a	6Mbps	1	36	5180	5171.70	5188.25	5179.98	-4.83
11a	6Mbps	1	44	5220	5211.75	5228.25	5220.00	0.00
11a	6Mbps	1	48	5240	5231.75	5248.25	5240.00	0.00
HT20	MCS0	1	36	5180	5171.15	5188.85	5180.00	0.00
HT20	MCS0	1	44	5220	5211.15	5228.75	5219.95	-9.58
HT20	MCS0	1	48	5240	5231.20	5248.80	5240.00	0.00
HT40	MCS0	1	38	5190	5171.82	5208.18	5190.00	0.00
HT40	MCS0	1	46	5230	5211.82	5248.18	5230.00	0.00

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Low Frequency (MHz)	High Frequency (MHz)	Center Frequency (MHz)	Frequency Stability (ppm)
11a	6Mbps	1	52	5260	5251.75	5268.25	5260.00	0.00
11a	6Mbps	1	60	5300	5291.75	5308.20	5299.98	-4.72
11a	6Mbps	1	64	5320	5311.75	5328.25	5320.00	0.00
HT20	MCS0	1	52	5260	5251.15	5268.75	5259.95	-9.51
HT20	MCS0	1	60	5300	5291.10	5308.75	5299.93	-14.15
HT20	MCS0	1	64	5320	5311.15	5328.75	5319.95	-9.40
HT40	MCS0	1	54	5270	5251.82	5288.18	5270.00	0.00
HT40	MCS0	1	62	5310	5291.82	5328.18	5310.00	0.00



Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Low Frequency (MHz)	High Frequency (MHz)	Center Frequency (MHz)	Frequency Stability (ppm)
11a	6Mbps	1	100	5500	5491.75	5508.25	5500.00	0.00
11a	6Mbps	1	116	5580	5571.75	5588.25	5580.00	0.00
11a	6Mbps	1	140	5700	5691.70	5708.25	5699.98	-4.39
HT20	MCS0	1	100	5500	5491.15	5508.75	5499.95	-9.09
HT20	MCS0	1	116	5580	5571.20	5588.75	5579.98	-4.48
HT20	MCS0	1	140	5700	5691.15	5708.75	5699.95	-8.77
HT40	MCS0	1	102	5510	5491.82	5528.18	5510.00	0.00
HT40	MCS0	1	110	5550	5531.82	5568.18	5550.00	0.00
HT40	MCS0	1	134	5670	5651.82	5688.18	5670.00	0.00

Note: Center Frequency = (Low Frequency + High Frequency) / 2.



3.8 Automatically Discontinue Transmission

3.8.1 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.

3.8.2 Measuring Instruments

See list of measuring instruments of this test report.

3.8.3 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.



3.9 Antenna Requirements

3.9.1 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.

3.9.2 Antenna Connected Construction

Embedded in Antenna.

3.9.3 Antenna Gain

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

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Aug. 05, 2013 ~ Aug. 20, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Aug. 05, 2013 ~ Aug. 20, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Aug. 05, 2013 ~ Aug. 20, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Thermal Chamber	Ten Billion	TTH-D3SP	TBN-930701	N/A	Jul. 19, 2013	Aug. 05, 2013 ~ Aug. 20, 2013	Jul. 18, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 13, 2012	Jul. 23, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Jul. 23, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Jul. 23, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Jul. 23, 2013	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9kHz~30GHz	Nov. 30, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 03, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MHz	Jul. 03, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Sep. 28, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Aug. 17, 2013 ~ Aug. 19, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Dec. 01, 2012	Aug. 17, 2013 ~ Aug. 19, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	159088	DC~18G High Gain	Feb. 27, 2013	Aug. 17, 2013 ~ Aug. 19, 2013	Feb. 26, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Aug. 17, 2013 ~ Aug. 19, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Aug. 17, 2013 ~ Aug. 19, 2013	N/A	Radiation (03CH07-HY)



5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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