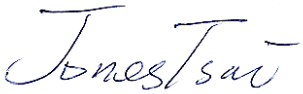
FCC RF Test Report

APPLICANT	:	LG Electronics Inc.
EQUIPMENT	:	Tablet
BRAND NAME	:	LG Electronics Inc.
MODEL NAME	:	LG-V490
FCC ID	:	ZNFV490
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on May 17, 2014 and testing was completed on Jun. 25, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR451713D	Rev. 01	Initial issue of report	Jul. 11, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	RSS-210 A9.2	26dB 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 7.08 dB at 40.260 MHz
3.6	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 11.50 dB at 2.318 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

LG Electronics Inc.
60-39, Kasan-dong, Keumchun-ku, Seoul Korea Zip code: 153-023

1.2 Manufacturer

LG ELECTRONICS MOBILECOMM U.S.A., INC
100 SYLVAN AVENUE ENGEWOOD CLIFFS, NEW JERSEY, 07632, U.S.A

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Tablet
Brand Name	LG Electronics Inc.
Model Name	LG-V490
FCC ID	ZNFV490
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth v4.0 EDR/LE
HW Version	Rev.A
SW Version	V107a-Op1-HQ
EUT Stage	Identical Prototype

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

1.4 Product Specification subjective to this standard

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 : 8.98 dBm / 0.0079 W 802.11n HT20 : 7.98 dBm / 0.0063 W 802.11n HT40 : 7.98 dBm / 0.0063 W **<5260 MHz ~ 5320 MHz>** 802.11a : 8.98 dBm / 0.0079 W 802.11n HT20 : 7.98 dBm / 0.0063 W 802.11n HT40 : 8.85 dBm / 0.0077 W **<5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz >** 802.11a : 8.99 dBm / 0.0063 W 802.11n HT20 : 9.31 dBm / 0.0085 W 802.11n HT40 : 8.95 dBm / 0.0079 W
Antenna Type	PIFA Antenna with gain -0.12 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 Location

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

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	**Sporton Site No.**		
	TH02-HY	CO05-HY	03CH07-HY

1.7 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04
- ANSI C63.4-2003

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

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

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38	**5190**	**46**	**5230**
	40	5200	48	5240

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

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

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

2.2 Pre-Scanned RF Power

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

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	8.99	8.52	8.74	8.69	8.73	8.57	8.56	8.52

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	9.31	9.13	9.12	9.13	9.14	9.09	9.11	9.13

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	8.95	8.88	8.81	8.77	8.93	8.70	8.82	8.78

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 ： Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter)			

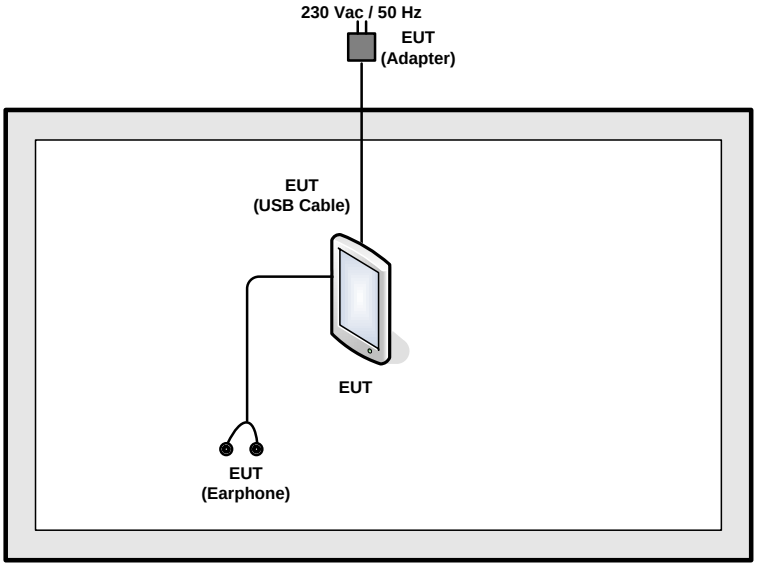
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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

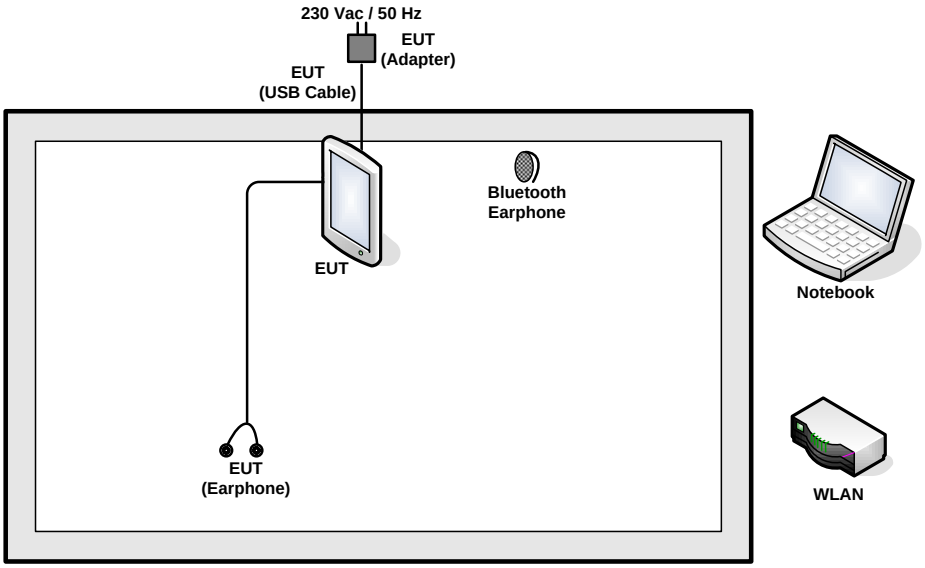
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A

2.6 EUT Operation Test Setup

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

2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

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

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 26dB Bandwidth Measurement

3.1.1 Description of 26dB 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.

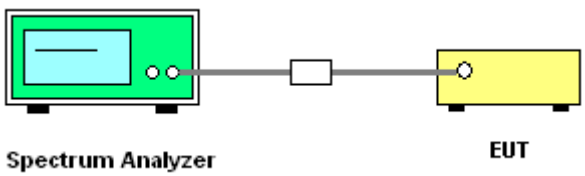
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04. 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. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB Bandwidth Plots

Test Band :	5GHz band 1	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	26dB Bandwidth (MHz)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	36	5180	22.10	16.99
11a	6Mbps	1	44	5220	22.00	16.99
11a	6Mbps	1	48	5240	22.00	16.99
HT20	MCS0	1	36	5180	22.15	16.99
HT20	MCS0	1	44	5220	22.70	16.99
HT20	MCS0	1	48	5240	22.75	16.99
HT40	MCS0	1	38	5190	45.18	16.99
HT40	MCS0	1	46	5230	44.46	16.99

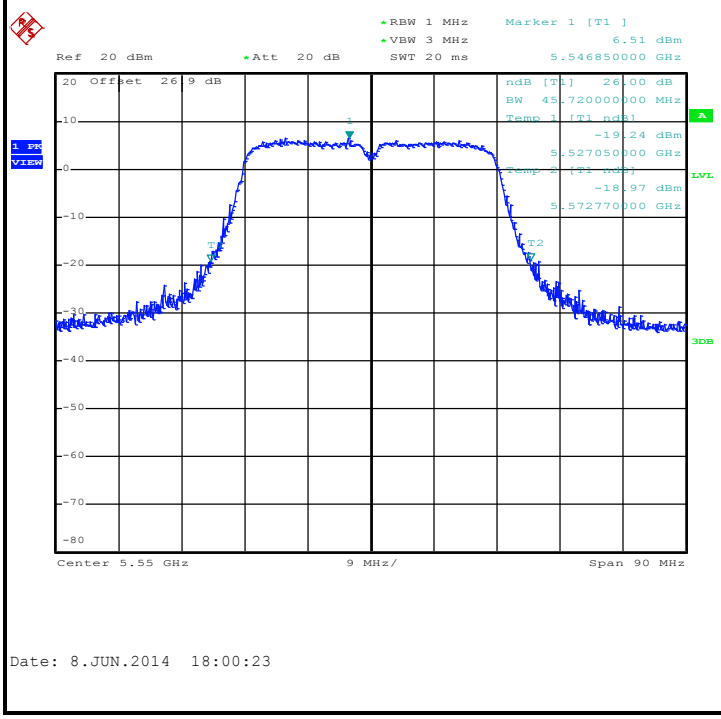
Test Band :	5GHz band 2	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	26dB Bandwidth (MHz)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	52	5260	22.30	23.98
11a	6Mbps	1	60	5300	22.35	23.98
11a	6Mbps	1	64	5320	22.00	23.98
HT20	MCS0	1	52	5260	22.65	23.98
HT20	MCS0	1	60	5300	22.60	23.98
HT20	MCS0	1	64	5320	22.50	23.98
HT40	MCS0	1	54	5270	44.82	23.98
HT40	MCS0	1	62	5310	45.09	23.98

Test Band :	5GHz band 3	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	Channel	Freq. (MHz)	26dB Bandwidth (MHz)	FCC 26dB Bandwidth Power Limit (dBm)
11a	6Mbps	1	100	5500	22.15	23.98
11a	6Mbps	1	116	5580	22.20	23.98
11a	6Mbps	1	140	5700	22.25	23.98
HT20	MCS0	1	100	5500	22.55	23.98
HT20	MCS0	1	116	5580	22.65	23.98
HT20	MCS0	1	140	5700	22.80	23.98
HT40	MCS0	1	102	5510	44.55	23.98
HT40	MCS0	1	110	5550	45.72	23.98
HT40	MCS0	1	134	5670	45.63	23.98

Maximum 26dB Bandwidth



3.1.6 Test Result of 20dB Occupied Bandwidth

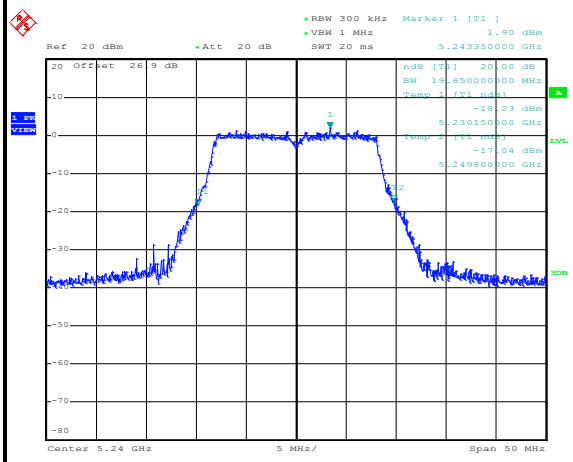
5GHz Band I								
Mod.	Data Rate	NTX	Channel	Freq. (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth Upper Frequency (FH) (MHz)	Upper Limit Line (MHz)	Pass/Fail
11a	6Mbps	1	48	5240	19.65	5249.80	5250	Pass
HT20	MCS0	1	48	5240	19.75	5249.90		Pass
HT40	MCS0	1	46	5230	40.23	5249.98		Pass

5GHz Band II								
Mod.	Data Rate	NTX	Channel	Freq. (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth Upper Frequency (FH) (MHz)	Upper Limit Line (MHz)	Pass/Fail
11a	6Mbps	1	52	5260	19.90	5250.00	5250	Pass
HT20	MCS0	1	52	5260	20.05	5250.05		Pass
HT40	MCS0	1	54	5270	40.32	5250.11		Pass

5GHz Band III								
Mod.	Data Rate	NTX	Channel	Freq. (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth Upper Frequency (FH) (MHz)	Upper Limit Line (MHz)	Pass/Fail
11a	6Mbps	1	132	5660	19.35	5650.30	5250	Pass
HT20	MCS0	1	132	5660	19.65	5650.20		Pass
HT40	MCS0	1	134	5670	39.96	5650.02		Pass

20dB Occupied Bandwidth for Band I

802.11a CH48 5240MHz



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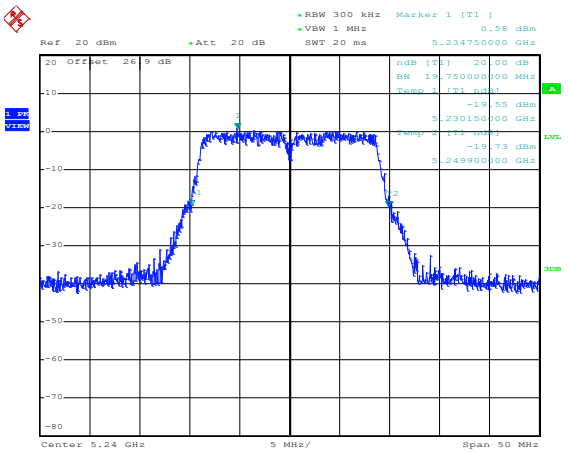
802.11n HT20 CH48 5240MHz



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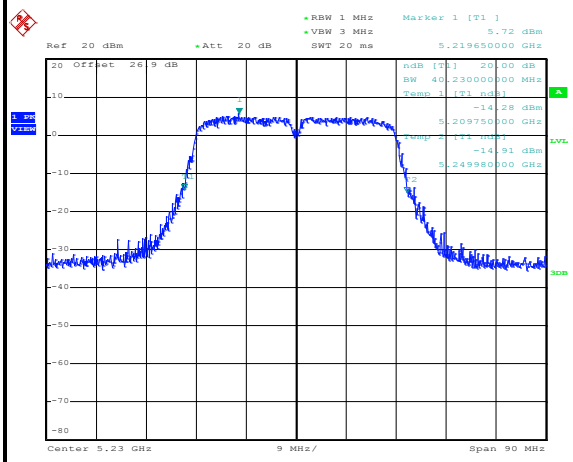
802.11n HT40 CH46 5230MHz



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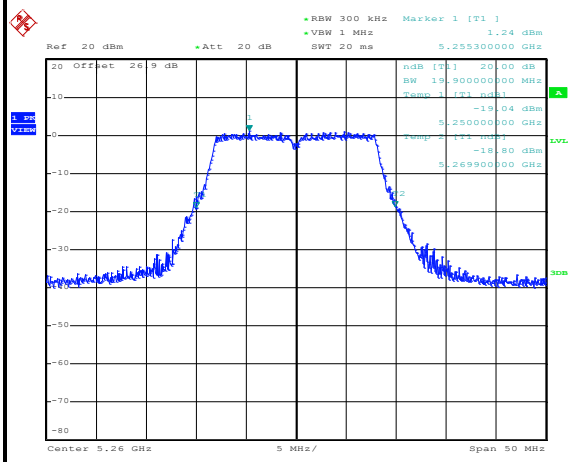
20dB Occupied Bandwidth for Band II

802.11a CH48 5260MHz



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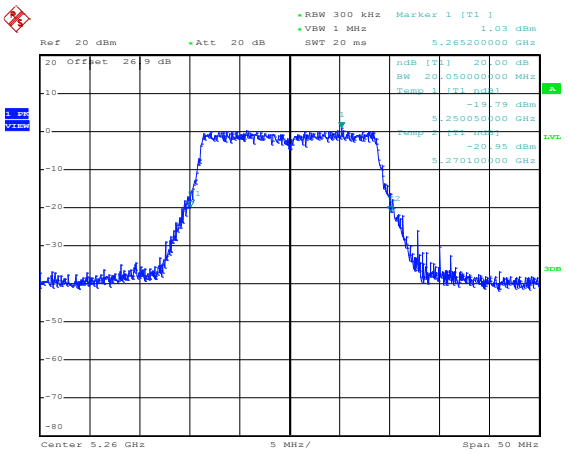
802.11n HT20 CH48 5260MHz



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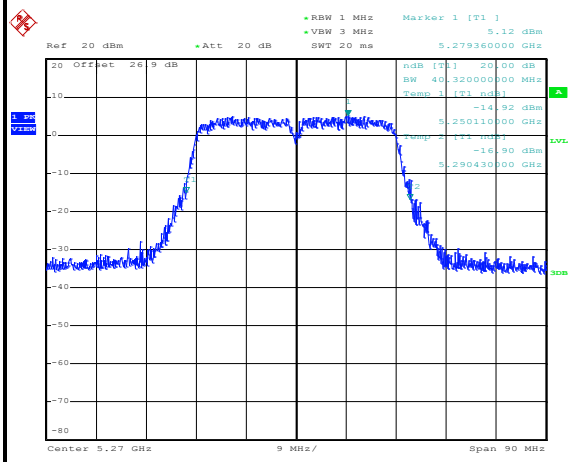
802.11n HT40 CH46 5270MHz



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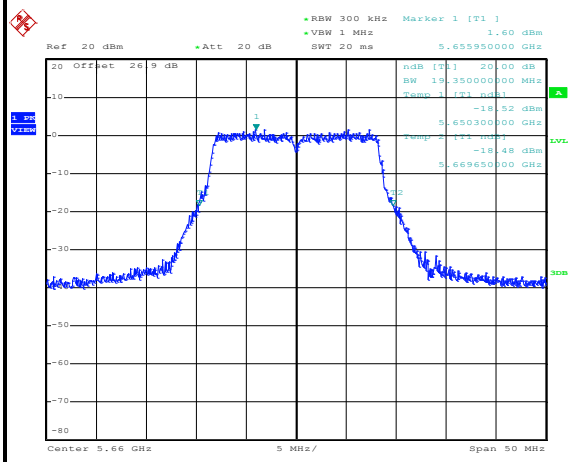
20dB Occupied Bandwidth for Band III

802.11a CH48 5660MHz



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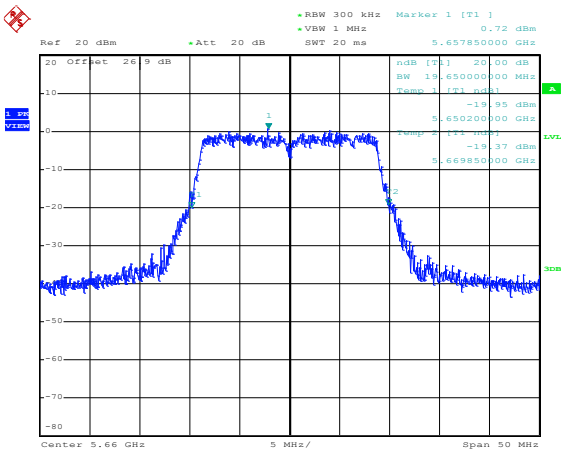
802.11n HT20 CH48 5660MHz



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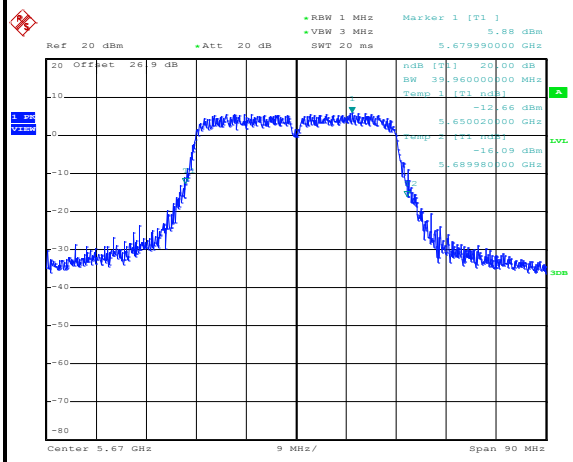
802.11n HT40 CH46 5670MHz



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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 dBm + 10log 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 dBm + 10log 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

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

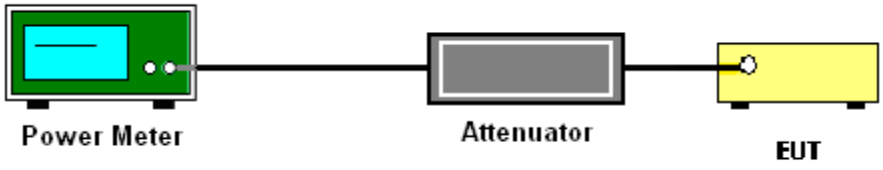
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04.

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Test Band :	5GHz band 1	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

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	0.20	8.97	16.99	-0.56	Pass
11a	6Mbps	1	44	5220	0.20	8.98	16.99	-0.56	Pass
11a	6Mbps	1	48	5240	0.20	8.88	16.99	-0.56	Pass
HT20	MCS0	1	36	5180	0.20	7.98	16.99	-0.56	Pass
HT20	MCS0	1	44	5220	0.20	7.92	16.99	-0.56	Pass
HT20	MCS0	1	48	5240	0.20	7.97	16.99	-0.56	Pass
HT40	MCS0	1	38	5190	0.43	7.98	16.99	-0.56	Pass
HT40	MCS0	1	46	5230	0.43	7.98	16.99	-0.56	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	0.20	8.97	-	-0.56	22.60	Pass
11a	6Mbps	1	44	5220	0.20	8.98		-0.56	22.59	Pass
11a	6Mbps	1	48	5240	0.20	8.88		-0.56	22.61	Pass
HT20	MCS0	1	36	5180	0.20	7.98		-0.56	22.75	Pass
HT20	MCS0	1	44	5220	0.20	7.92		-0.56	22.78	Pass
HT20	MCS0	1	48	5240	0.20	7.97		-0.56	22.78	Pass
HT40	MCS0	1	38	5190	0.43	7.98		-0.56	23.01	Pass
HT40	MCS0	1	46	5230	0.43	7.98		-0.56	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.

Test Band :	5GHz band 2	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

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	0.20	8.98	23.98	-0.56	Pass
11a	6Mbps	1	60	5300	0.20	8.98	23.98	-0.56	Pass
11a	6Mbps	1	64	5320	0.20	8.98	23.98	-0.56	Pass
HT20	MCS0	1	52	5260	0.20	7.92	23.98	-0.56	Pass
HT20	MCS0	1	60	5300	0.20	7.98	23.98	-0.56	Pass
HT20	MCS0	1	64	5320	0.20	7.98	23.98	-0.56	Pass
HT40	MCS0	1	54	5270	0.43	7.96	23.98	-0.56	Pass
HT40	MCS0	1	62	5310	0.43	8.85	23.98	-0.56	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	0.20	8.98	-	-0.56	29.60	Pass
11a	6Mbps	1	60	5300	0.20	8.98		-0.56	29.56	Pass
11a	6Mbps	1	64	5320	0.20	8.98		-0.56	29.61	Pass
HT20	MCS0	1	52	5260	0.20	7.92		-0.56	29.78	Pass
HT20	MCS0	1	60	5300	0.20	7.98		-0.56	29.76	Pass
HT20	MCS0	1	64	5320	0.20	7.98		-0.56	29.78	Pass
HT40	MCS0	1	54	5270	0.43	7.96		-0.56	30.00	Pass
HT40	MCS0	1	62	5310	0.43	8.85		-0.56	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz 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.

Test Band :	5GHz band 3	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

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	0.20	8.73	23.98	-0.12	Pass
11a	6Mbps	1	116	5580	0.20	8.71	23.98	-0.12	Pass
11a	6Mbps	1	140	5700	0.20	8.99	23.98	-0.12	Pass
HT20	MCS0	1	100	5500	0.20	8.88	23.98	-0.12	Pass
HT20	MCS0	1	116	5580	0.20	8.84	23.98	-0.12	Pass
HT20	MCS0	1	140	5700	0.20	9.31	23.98	-0.12	Pass
HT40	MCS0	1	102	5510	0.43	7.95	23.98	-0.12	Pass
HT40	MCS0	1	110	5550	0.43	8.95	23.98	-0.12	Pass
HT40	MCS0	1	134	5670	0.43	7.99	23.98	-0.12	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	0.20	8.73	-	-0.12	29.62	Pass
11a	6Mbps	1	116	5580	0.20	8.71		-0.12	29.59	Pass
11a	6Mbps	1	140	5700	0.20	8.99		-0.12	29.59	Pass
HT20	MCS0	1	100	5500	0.20	8.88		-0.12	29.76	Pass
HT20	MCS0	1	116	5580	0.20	8.84		-0.12	29.80	Pass
HT20	MCS0	1	140	5700	0.20	9.31		-0.12	29.79	Pass
HT40	MCS0	1	102	5510	0.43	7.95		-0.12	30.00	Pass
HT40	MCS0	1	110	5550	0.43	8.95		-0.12	30.00	Pass
HT40	MCS0	1	134	5670	0.43	7.99		-0.12	30.00	Pass

Note:

1. Final Output Power equals to Measured Output Power adds the duty factor.
2. For the 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz 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.

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

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

3.3.3 Test Procedures

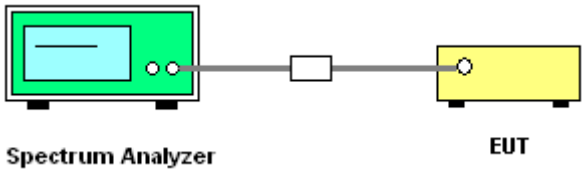
The testing follows FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04.
Section F) Peak power spectral density (PPSD).
Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during 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 Old Rules v01r04.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = RMS
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Band :	5GHz band 1	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

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	0.20	-2.53	4.00	-0.56	10	Pass
11a	6Mbps	1	44	5220	0.20	-2.06	4.00	-0.56	10	Pass
11a	6Mbps	1	48	5240	0.20	-1.94	4.00	-0.56	10	Pass
HT20	MCS0	1	36	5180	0.20	-2.57	4.00	-0.56	10	Pass
HT20	MCS0	1	44	5220	0.20	-2.19	4.00	-0.56	10	Pass
HT20	MCS0	1	48	5240	0.20	-2.14	4.00	-0.56	10	Pass
HT40	MCS0	1	38	5190	0.43	-3.46	4.00	-0.56	10	Pass
HT40	MCS0	1	46	5230	0.43	-3.42	4.00	-0.56	10	Pass

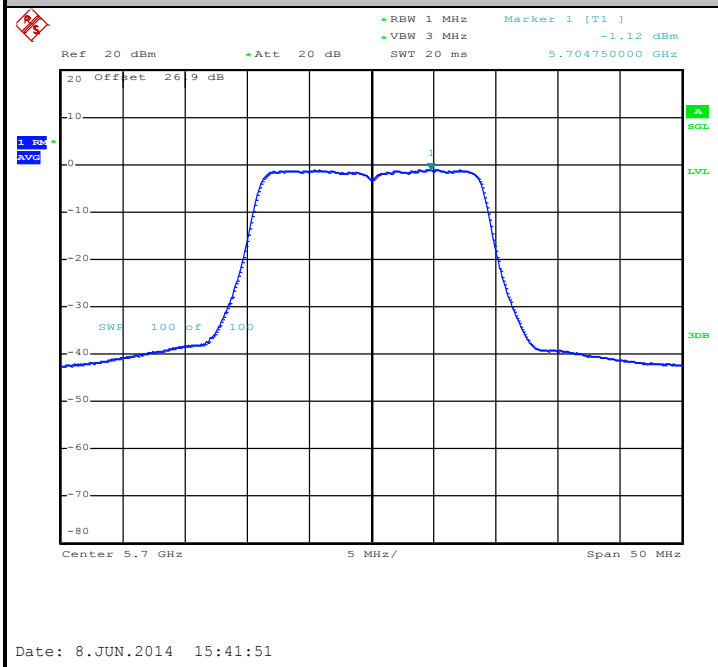
Test Band :	5GHz band 2	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	52	5260	0.20	-2.16	11.00	-0.56	Pass
11a	6Mbps	1	60	5300	0.20	-1.73	11.00	-0.56	Pass
11a	6Mbps	1	64	5320	0.20	-1.68	11.00	-0.56	Pass
HT20	MCS0	1	52	5260	0.20	-2.31	11.00	-0.56	Pass
HT20	MCS0	1	60	5300	0.20	-1.85	11.00	-0.56	Pass
HT20	MCS0	1	64	5320	0.20	-1.79	11.00	-0.56	Pass
HT40	MCS0	1	54	5270	0.43	-3.40	11.00	-0.56	Pass
HT40	MCS0	1	62	5310	0.43	-2.79	11.00	-0.56	Pass

Test Band :	5GHz band 3	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	Data Rate	N_{TX}	CH	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm)	DG (dBi)	Pass/Fail
11a	6Mbps	1	100	5500	0.20	-2.25	11.00	-0.12	Pass
11a	6Mbps	1	116	5580	0.20	-2.44	11.00	-0.12	Pass
11a	6Mbps	1	140	5700	0.20	-1.95	11.00	-0.12	Pass
HT20	MCS0	1	100	5500	0.20	-1.60	11.00	-0.12	Pass
HT20	MCS0	1	116	5580	0.20	-1.56	11.00	-0.12	Pass
HT20	MCS0	1	140	5700	0.20	-0.92	11.00	-0.12	Pass
HT40	MCS0	1	102	5510	0.43	-2.54	11.00	-0.12	Pass
HT40	MCS0	1	110	5550	0.43	-2.50	11.00	-0.12	Pass
HT40	MCS0	1	134	5670	0.43	-2.38	11.00	-0.12	Pass

Worst Case Power Spectral Density(dBm/MHz)



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

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

3.4.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04.

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 ≥ 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

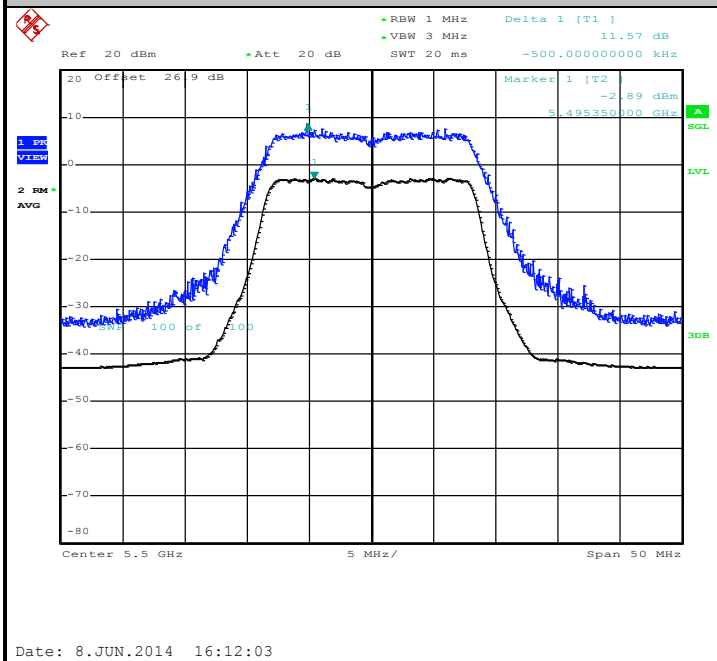
3.4.5 Test Result of Peak Excursion Ratio

Test Band :	5GHz band 1,2,3	Temperature :	21~26℃
Test Engineer :	Stuart Lin and Bill Kuo	Relative Humidity :	45~54%

Mod.	N_{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	1	100	5500	9.51	9.93	10.82	9.39	-	13	Pass
HT20	1	100	5500	9.68	10.02	9.50	10.03	-	13	Pass
HT40	1	102	5510	10.22	9.35	9.61	9.94	-	13	Pass

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

Worst Case Peak Excursion Ratio (dB)



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

Duty Cycle Offset: 0.72 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.

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

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

(3) KDB789033 Old Rules v01r04 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

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

3.5.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures Old Rules v01r04. 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

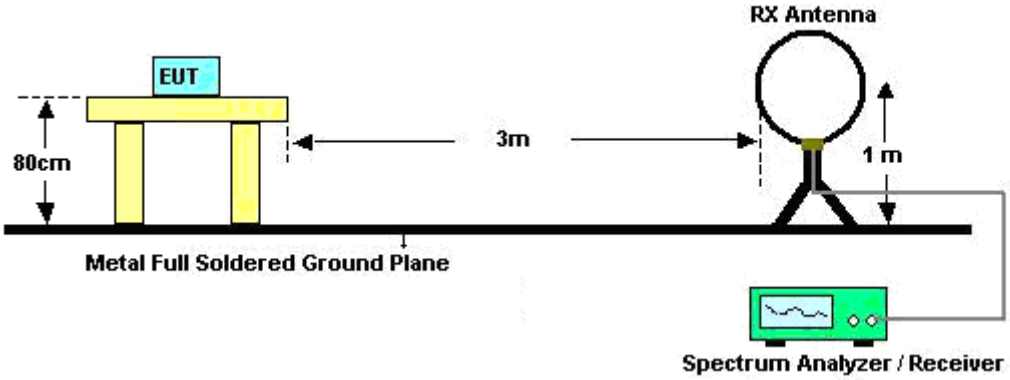
   - The setting follows H) 6) of FCC KDB 789033.
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(μs)	1/T(kHz)	VBW Setting
802.11a	95.51	2040	0.49	1kHz
802.11n HT20	95.45	1890	0.53	1kHz
802.11n HT40	90.59	924	1.08	3kHz

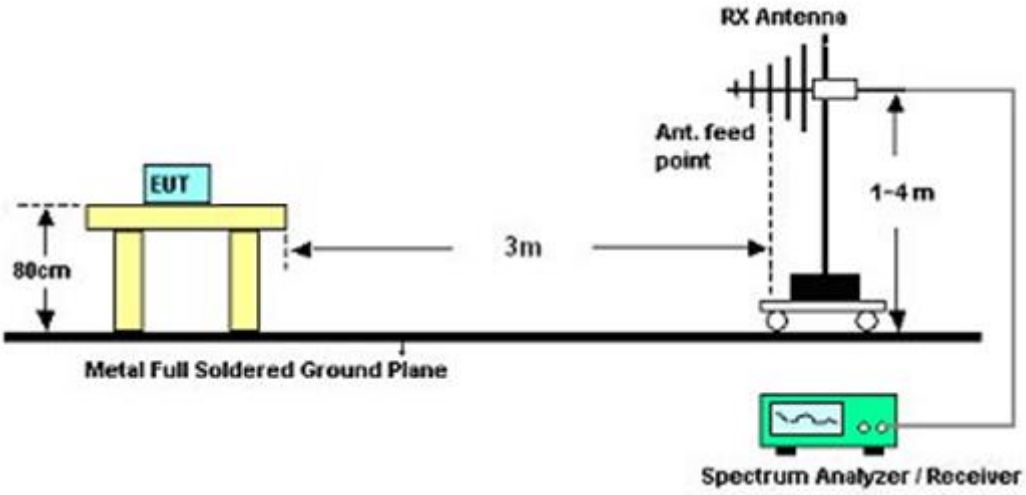
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters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

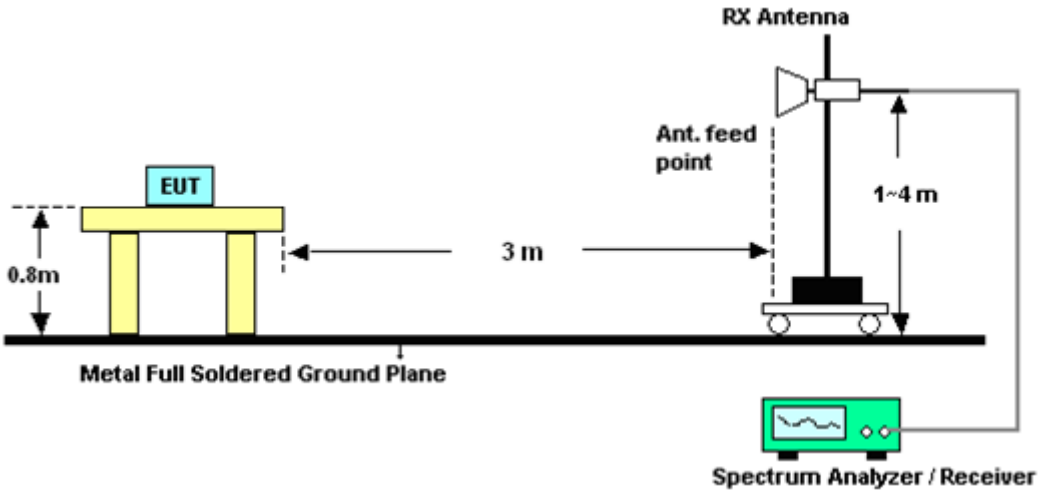
For radiated emissions below 30MHz



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 :	23~25°C
Test Channel :	36	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5127.8	54.3	-19.7	74	42.98	34.59	9.18	32.45	128	234	Peak
5127.65	41.58	-12.42	54	30.26	34.59	9.18	32.45	128	234	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
5127.2	53.77	-20.23	74	42.45	34.59	9.18	32.45	137	0	Peak
5127.65	41.25	-12.75	54	29.93	34.59	9.18	32.45	137	0	Average

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5045.6	53.94	-20.06	74	42.77	34.47	9.05	32.35	126	230	Peak
5148.2	41.42	-12.58	54	30.08	34.61	9.22	32.49	126	230	Average
5367.16	55.32	-18.68	74	43.98	34.91	9.61	33.18	126	230	Peak
5387.18	41.12	-12.88	54	29.81	34.94	9.65	33.28	126	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
5123.45	53.42	-20.58	74	42.1	34.59	9.18	32.45	147	0	Peak
5146.7	40.48	-13.52	54	29.14	34.61	9.22	32.49	147	0	Average
5360.34	54.41	-19.59	74	43.09	34.89	9.61	33.18	147	0	Peak
5418.86	41.05	-12.95	54	29.77	34.98	9.69	33.39	147	0	Average

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5021.3	54.4	-19.6	74	43.26	34.45	9.01	32.32	117	241	Peak
5141.9	40.41	-13.59	54	29.03	34.61	9.22	32.45	117	241	Average
5361.66	55.38	-18.62	74	44.04	34.91	9.61	33.18	117	241	Peak
5371.78	41.89	-12.11	54	30.55	34.91	9.61	33.18	117	241	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
5146.55	53.97	-20.03	74	42.63	34.61	9.22	32.49	100	14	Peak
5146.7	40.38	-13.62	54	29.04	34.61	9.22	32.49	100	14	Average
5421.5	54.9	-19.1	74	43.62	34.98	9.69	33.39	100	14	Peak
5422.27	40.96	-13.04	54	29.68	34.98	9.69	33.39	100	14	Average

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5371.45	55.25	-18.75	74	43.91	34.91	9.61	33.18	137	235	Peak
5372.22	42.79	-11.21	54	31.45	34.91	9.61	33.18	137	235	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
5427.99	54.53	-19.47	74	43.34	34.98	9.69	33.48	187	9	Peak
5372	42.35	-11.65	54	31.01	34.91	9.61	33.18	187	9	Average

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5463.6	54.96	-19.04	74	43.7	35.05	9.78	33.57	103	201	Peak
5448.08	41.23	-12.77	54	29.95	35.03	9.73	33.48	103	201	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
5468.88	53.99	-20.01	74	42.73	35.05	9.78	33.57	122	95	Peak
5447.44	41.15	-12.85	54	29.87	35.03	9.73	33.48	122	95	Average

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5742.44	54.83	-19.17	74	43.7	35.24	10.06	34.17	106	239	Peak
5752.28	42.09	-11.91	54	30.94	35.26	10.06	34.17	106	239	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
5752.28	54.27	-19.73	74	43.12	35.26	10.06	34.17	112	0	Peak
5752.28	41.12	-12.88	54	29.97	35.26	10.06	34.17	112	0	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5126.9	55.3	-18.7	74	43.98	34.59	9.18	32.45	140	237	Peak
5128.25	41.68	-12.32	54	30.36	34.59	9.18	32.45	140	237	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
5128.85	54.34	-19.66	74	43.02	34.59	9.18	32.45	137	2	Peak
5128.4	41.43	-12.57	54	30.11	34.59	9.18	32.45	137	2	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5069.45	54.03	-19.97	74	42.83	34.49	9.1	32.39	126	230	Peak
5144.9	40.48	-13.52	54	29.14	34.61	9.22	32.49	126	230	Average
5418.75	55.16	-18.84	74	43.88	34.98	9.69	33.39	126	230	Peak
5372.22	40.97	-13.03	54	29.63	34.91	9.61	33.18	126	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
5065.25	53.66	-20.34	74	42.47	34.49	9.05	32.35	146	0	Peak
5144.9	40.38	-13.62	54	29.04	34.61	9.22	32.49	146	0	Average
5354.84	54.7	-19.3	74	43.43	34.89	9.56	33.18	146	0	Peak
5406.1	40.92	-13.08	54	29.66	34.96	9.69	33.39	146	0	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5140.7	55.18	-18.82	74	43.8	34.61	9.22	32.45	117	240	Peak
5140.25	41.47	-12.53	54	30.09	34.61	9.22	32.45	117	240	Average
5384.87	55.37	-18.63	74	44.06	34.94	9.65	33.28	117	240	Peak
5389.27	41.98	-12.02	54	30.67	34.94	9.65	33.28	117	240	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
5033.45	54.12	-19.88	74	42.98	34.45	9.01	32.32	100	14	Peak
5141.75	40.5	-13.5	54	29.12	34.61	9.22	32.45	100	14	Average
5441.08	54.63	-19.37	74	43.37	35.01	9.73	33.48	100	14	Peak
5403.24	41.03	-12.97	54	29.81	34.96	9.65	33.39	100	14	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5391.8	55.56	-18.44	74	44.25	34.94	9.65	33.28	137	235	Peak
5371.89	42.53	-11.47	54	31.19	34.91	9.61	33.18	137	235	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
5380.8	54.38	-19.62	74	43.07	34.94	9.65	33.28	187	9	Peak
5371.89	42.02	-11.98	54	30.68	34.91	9.61	33.18	187	9	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5367.76	54.78	-19.22	74	43.44	34.91	9.61	33.18	103	201	Peak
5448.24	41.75	-12.25	54	30.47	35.03	9.73	33.48	103	201	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
5440.56	54.31	-19.69	74	43.05	35.01	9.73	33.48	122	95	Peak
5448.4	41.17	-12.83	54	29.89	35.03	9.73	33.48	122	95	Average

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5754.12	56.19	-17.81	74	45.04	35.26	10.06	34.17	106	239	Peak
5751.64	42.49	-11.51	54	31.34	35.26	10.06	34.17	106	239	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
5750.6	54.31	-19.69	74	43.18	35.24	10.06	34.17	112	0	Peak
5752.12	41.38	-12.62	54	30.23	35.26	10.06	34.17	112	0	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	38	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5103.5	54.4	-19.6	74	43.14	34.54	9.14	32.42	132	235	Peak
5150	43.73	-10.27	54	32.39	34.61	9.22	32.49	132	235	Average
5361	54.01	-19.99	74	42.67	34.91	9.61	33.18	132	235	Peak
5423.37	43.26	-10.74	54	31.98	34.98	9.69	33.39	132	235	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	53	-21	74	41.66	34.61	9.22	32.49	113	351	Peak
5148.35	43.97	-10.03	54	32.63	34.61	9.22	32.49	113	351	Average
5385.97	53.9	-20.1	74	42.59	34.94	9.65	33.28	113	351	Peak
5369.69	42.05	-11.95	54	30.71	34.91	9.61	33.18	113	351	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	46	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5062.1	53.68	-20.32	74	42.49	34.49	9.05	32.35	107	200	Peak
5141.6	41.51	-12.49	54	30.13	34.61	9.22	32.45	107	200	Average
5397.52	55.62	-18.38	74	44.29	34.96	9.65	33.28	107	200	Peak
5428.65	42.08	-11.92	54	30.82	35.01	9.73	33.48	107	200	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
5120.15	53.11	-20.89	74	41.82	34.56	9.18	32.45	100	346	Peak
5047.1	41.48	-12.52	54	30.31	34.47	9.05	32.35	100	346	Average
5401.92	52.79	-21.21	74	41.57	34.96	9.65	33.39	100	346	Peak
5395.87	42.07	-11.93	54	30.74	34.96	9.65	33.28	100	346	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	54	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5070.2	54.81	-19.19	74	43.61	34.49	9.1	32.39	106	231	Peak
5017.55	42.57	-11.43	54	31.5	34.42	8.97	32.32	106	231	Average
5364.74	53.19	-20.81	74	41.85	34.91	9.61	33.18	106	231	Peak
5404.89	43.12	-10.88	54	31.86	34.96	9.69	33.39	106	231	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
5132.3	54.09	-19.91	74	42.77	34.59	9.18	32.45	200	326	Peak
5140.7	41.62	-12.38	54	30.24	34.61	9.22	32.45	200	326	Average
5386.52	52.77	-21.23	74	41.46	34.94	9.65	33.28	200	326	Peak
5375.74	42.2	-11.8	54	30.96	34.91	9.61	33.28	200	326	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	62	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5137.4	53.6	-20.4	74	42.28	34.59	9.18	32.45	119	184	Peak
5136.8	41.54	-12.46	54	30.22	34.59	9.18	32.45	119	184	Average
5437.23	54.8	-19.2	74	43.54	35.01	9.73	33.48	119	184	Peak
5417.32	43.35	-10.65	54	32.07	34.98	9.69	33.39	119	184	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
5016.95	52.95	-21.05	74	41.88	34.42	8.97	32.32	173	215	Peak
5135.45	41.48	-12.52	54	30.16	34.59	9.18	32.45	173	215	Average
5417.32	53.92	-20.08	74	42.64	34.98	9.69	33.39	173	215	Peak
5351.98	42.59	-11.41	54	31.32	34.89	9.56	33.18	173	215	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	102	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5430.8	53.16	-20.84	74	41.9	35.01	9.73	33.48	124	231	Peak
5404.72	43.23	-10.77	54	31.97	34.96	9.69	33.39	124	231	Average
5761.56	53.45	-20.55	74	42.33	35.26	10.06	34.2	124	231	Peak
5743.08	42.58	-11.42	54	31.45	35.24	10.06	34.17	124	231	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
5466.48	52.54	-21.46	74	41.28	35.05	9.78	33.57	112	98	Peak
5365.68	42.46	-11.54	54	31.12	34.91	9.61	33.18	112	98	Average
5754.44	52.48	-21.52	74	41.33	35.26	10.06	34.17	112	98	Peak
5736.44	41.7	-12.3	54	30.59	35.24	10.04	34.17	112	98	Average

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	134	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh		

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
5377.84	53.64	-20.36	74	42.37	34.94	9.61	33.28	100	193	Peak
5409.2	43.2	-10.8	54	31.94	34.96	9.69	33.39	100	193	Average
5754.04	54.08	-19.92	74	42.93	35.26	10.06	34.17	100	193	Peak
5727.8	42.68	-11.32	54	31.56	35.23	10.04	34.15	100	193	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
5406.8	52.68	-21.32	74	41.42	34.96	9.69	33.39	158	348	Peak
5452.08	42.28	-11.72	54	31.04	35.03	9.78	33.57	158	348	Average
5755	52.03	-21.97	74	40.88	35.26	10.06	34.17	158	348	Peak
5749.64	41.69	-12.31	54	30.56	35.24	10.06	34.17	158	348	Average

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

Test Mode :	802.11a	**Temperature :**	23~25°C
Test Channel :	36	**Relative Humidity :**	44~48%
Test Engineer :	Stan Hsieh	**Polarization :**	Horizontal
Remark :	1. 5174 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
45.12	23.58	-16.42	40	43.97	10.15	0.66	31.2	-	-	Peak
47.82	32.84	-7.16	40	53.92	9.45	0.67	31.2	125	352	Peak
69.96	19.27	-20.73	40	43.33	6.4	0.84	31.3	-	-	Peak
319.6	24.47	-21.53	46	40.26	13.4	1.81	31	-	-	Peak
639.5	34.02	-11.98	46	41.33	20.4	2.81	30.52	-	-	Peak
746.6	27.24	-18.76	46	32.46	22.13	3.05	30.4	-	-	Peak
5174	92.5	-	-	81.09	34.66	9.27	32.52	128	234	Average
5174	102.63	-	-	91.22	34.66	9.27	32.52	128	234	Peak
10359	42.54	-31.46	74	50.48	37.22	13.71	58.87	100	0	Peak
15540	48.58	-25.42	74	50.17	40.34	15.56	57.49	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5176 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
49.44	29.45	-10.55	40	51.21	8.75	0.69	31.2	155	221	Peak
98.85	23.96	-19.54	43.5	43.91	10.16	0.99	31.1	-	-	Peak
173.91	21.87	-21.63	43.5	42.27	9.38	1.24	31.02	-	-	Peak
426	25.44	-20.56	46	37.16	16.82	2.23	30.77	-	-	Peak
503	21.15	-24.85	46	31.27	18.03	2.46	30.61	-	-	Peak
846	25.2	-20.8	46	29.07	23.26	3.26	30.39	-	-	Peak
5176	91.23	-	-	79.82	34.66	9.27	32.52	137	0	Average
5176	101.79	-	-	90.38	34.66	9.27	32.52	137	0	Peak
10359	42.65	-31.35	74	50.59	37.22	13.71	58.87	100	0	Peak
15540	47.78	-26.22	74	49.37	40.34	15.56	57.49	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5224 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
5224	92.63	-	-	81.23	34.7	9.35	32.65	140	234	Average
5224	102.97	-	-	91.57	34.7	9.35	32.65	140	234	Peak
10440	42.73	-31.27	74	50.64	37.26	13.71	58.88	100	0	Peak
15660	47.51	-26.49	74	48.72	40.49	15.65	57.35	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5224 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
5224	91.22	-	-	79.82	34.7	9.35	32.65	136	1	Average
5224	102.2	-	-	90.8	34.7	9.35	32.65	136	1	Peak
10440	43.57	-30.43	74	51.48	37.26	13.71	58.88	100	0	Peak
15660	47.3	-26.7	74	48.51	40.49	15.65	57.35	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5246 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
5246	92.58	-	-	81.2	34.75	9.39	32.76	126	230	Average
5246	102.68	-	-	91.3	34.75	9.39	32.76	126	230	Peak
10479	43.93	-30.07	74	51.81	37.29	13.72	58.89	100	0	Peak
15720	47.72	-26.28	74	48.73	40.57	15.69	57.27	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5244 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
5244	91.11	-	-	79.62	34.75	9.39	32.65	147	0	Average
5244	100.82	-	-	89.33	34.75	9.39	32.65	147	0	Peak
10479	44.02	-29.98	74	51.9	37.29	13.72	58.89	100	0	Peak
15720	48.93	-25.07	74	49.94	40.57	15.69	57.27	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5264 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
5264	92.29	-	-	80.84	34.77	9.44	32.76	117	241	Average
5264	102.35	-	-	90.9	34.77	9.44	32.76	117	241	Peak
10521	44.28	-29.72	74	52.08	37.32	13.72	58.84	100	0	Peak
15780	47.76	-26.24	74	48.6	40.63	15.75	57.22	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5264 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
5264	92.01	-	-	80.56	34.77	9.44	32.76	100	14	Average
5264	101.76	-	-	90.31	34.77	9.44	32.76	100	14	Peak
10521	44.16	-29.84	74	51.96	37.32	13.72	58.84	100	0	Peak
15780	49.59	-24.41	74	50.43	40.63	15.75	57.22	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5306 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
5306	91.67	-	-	80.34	34.82	9.48	32.97	138	235	Average
5306	101.76	-	-	90.43	34.82	9.48	32.97	138	235	Peak
10602	42.07	-31.93	74	49.53	37.42	13.73	58.61	100	0	Peak
15900	47.19	-26.81	74	47.65	40.78	15.84	57.08	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5306 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
5306	90.85	-	-	79.52	34.82	9.48	32.97	100	11	Average
5306	101.11	-	-	89.78	34.82	9.48	32.97	100	11	Peak
10602	41.9	-32.1	74	49.36	37.42	13.73	58.61	100	0	Peak
15900	47.72	-26.28	74	48.18	40.78	15.84	57.08	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5326 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
31.62	21.41	-18.59	40	34.52	17.76	0.55	31.42	-	-	Peak
149.07	16.21	-27.29	43.5	35.16	10.94	1.21	31.1	-	-	Peak
213.33	32.8	-10.7	43.5	53.26	9.23	1.38	31.07	101	10	Peak
319.6	23.77	-22.23	46	39.56	13.4	1.81	31	-	-	Peak
426	26.17	-19.83	46	37.89	16.82	2.23	30.77	-	-	Peak
639.5	33.98	-12.02	46	41.29	20.4	2.81	30.52	-	-	Peak
5326	92.01	-	-	80.73	34.84	9.52	33.08	137	235	Average
5326	102.18	-	-	90.9	34.84	9.52	33.08	137	235	Peak
10641	42.63	-31.37	74	49.95	37.47	13.73	58.52	100	0	Peak
15960	47.39	-26.61	74	47.65	40.86	15.88	57	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5324 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
53.76	22.37	-17.63	40	45.65	7.2	0.72	31.2	-	-	Peak
98.85	22.11	-21.39	43.5	42.06	10.16	0.99	31.1	-	-	Peak
213.33	25.35	-18.15	43.5	45.81	9.23	1.38	31.07	-	-	Peak
426	23.93	-22.07	46	35.65	16.82	2.23	30.77	-	-	Peak
639.5	34.17	-11.83	46	41.48	20.4	2.81	30.52	111	83	Peak
853	27.96	-18.04	46	31.81	23.27	3.27	30.39	-	-	Peak
5324	91.32	-	-	80.04	34.84	9.52	33.08	187	9	Average
5324	101.71	-	-	90.43	34.84	9.52	33.08	187	9	Peak
10641	42.15	-31.85	74	49.47	37.47	13.73	58.52	100	0	Peak
15960	47.38	-26.62	74	47.64	40.86	15.88	57	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5506 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
5506	89.94	-	-	78.72	35.1	9.86	33.74	103	201	Average
5506	99.98	-	-	88.76	35.1	9.86	33.74	103	201	Peak
11001	47.31	-26.69	74	53.21	37.9	13.76	57.56	100	0	Peak
16500	46.8	-27.2	74	45.24	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5504 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
5504	88.45	-	-	77.23	35.1	9.86	33.74	122	95	Average
5504	98.3	-	-	87.08	35.1	9.86	33.74	122	95	Peak
11001	46.88	-27.12	74	52.78	37.9	13.76	57.56	100	0	Peak
16500	46.99	-27.01	74	45.43	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5576 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
5576	90.54	-	-	79.4	35.14	9.92	33.92	111	203	Average
5576	100.78	-	-	89.64	35.14	9.92	33.92	111	203	Peak
11160	45	-29	74	50.43	38	13.93	57.36	100	0	Peak
16740	47.18	-26.82	74	45.12	41.88	16.23	56.05	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5576 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
5576	90.32	-	-	79.18	35.14	9.92	33.92	136	341	Average
5576	100.39	-	-	89.25	35.14	9.92	33.92	136	341	Peak
11160	46.47	-27.53	74	51.9	38	13.93	57.36	100	0	Peak
16740	47.42	-26.58	74	45.36	41.88	16.23	56.05	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
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. 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
30.54	20.42	-19.58	40	33.06	18.28	0.54	31.46	-	-	Peak
42.96	20.5	-19.5	40	39.16	11.9	0.64	31.2	-	-	Peak
141.78	16.03	-27.47	43.5	34.43	11.5	1.2	31.1	-	-	Peak
319.6	23.9	-22.1	46	39.69	13.4	1.81	31	-	-	Peak
426	25.03	-20.97	46	36.75	16.82	2.23	30.77	-	-	Peak
639.5	34.5	-11.5	46	41.81	20.4	2.81	30.52	111	50	Peak
5698	88.76	-	-	77.65	35.21	10.02	34.12	106	239	Average
5698	98.87	-	-	87.76	35.21	10.02	34.12	106	239	Peak
11400	47.13	-26.87	74	51.85	38.14	14.21	57.07	100	0	Peak
17100	49.27	-24.73	74	46.65	42.32	16.46	56.16	100	0	Peak

Test Mode :	802.11a	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5696 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
35.4	23.19	-16.81	40	38.12	15.76	0.59	31.28	161	260	Peak
75.9	20.49	-19.51	40	44	6.83	0.86	31.2	-	-	Peak
147.99	21.27	-22.23	43.5	40.08	11.08	1.21	31.1	-	-	Peak
426	24.63	-21.37	46	36.35	16.82	2.23	30.77	-	-	Peak
456.8	23.83	-22.17	46	34.93	17.37	2.31	30.78	-	-	Peak
504.4	20.47	-25.53	46	30.59	18.04	2.46	30.62	-	-	Peak
5696	78.1	-	-	66.99	35.21	10.02	34.12	112	0	Average
5696	97.88	-	-	86.77	35.21	10.02	34.12	112	0	Peak
11400	48.97	-25.03	74	53.69	38.14	14.21	57.07	100	0	Peak
17100	50.1	-23.9	74	47.48	42.32	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5174 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
41.61	21.38	-18.62	40	39.35	12.6	0.63	31.2	-	-	Peak
49.17	19.56	-20.44	40	41.32	8.75	0.69	31.2	-	-	Peak
59.16	15.97	-24.03	40	40.42	6.08	0.75	31.28	-	-	Peak
319.6	23.85	-22.15	46	39.64	13.4	1.81	31	-	-	Peak
639.5	34.46	-11.54	46	41.77	20.4	2.81	30.52	121	85	Peak
853	27.82	-18.18	46	31.67	23.27	3.27	30.39	-	-	Peak
5174	91.03	-	-	79.62	34.66	9.27	32.52	140	237	Average
5174	101.1	-	-	89.69	34.66	9.27	32.52	140	237	Peak
10359	41.93	-32.07	74	49.87	37.22	13.71	58.87	100	0	Peak
15540	48.31	-25.69	74	49.9	40.34	15.56	57.49	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	36	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
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
30.54	28.46	-11.54	40	41.1	18.28	0.54	31.46	174	87	Peak
213.33	25.63	-17.87	43.5	46.09	9.23	1.38	31.07	-	-	Peak
227.37	20.34	-25.66	46	40.02	9.86	1.46	31	-	-	Peak
426	23.33	-22.67	46	35.05	16.82	2.23	30.77	-	-	Peak
639.5	33.28	-12.72	46	40.59	20.4	2.81	30.52	-	-	Peak
853	27	-19	46	30.85	23.27	3.27	30.39	-	-	Peak
5178	90.4	-	-	78.99	34.66	9.27	32.52	137	2	Average
5178	100.3	-	-	88.89	34.66	9.27	32.52	137	2	Peak
10359	43.75	-30.25	74	51.69	37.22	13.71	58.87	100	0	Peak
15540	48.66	-25.34	74	50.25	40.34	15.56	57.49	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5224 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
5224	91.38	-	-	79.98	34.7	9.35	32.65	140	234	Average
5224	101.4	-	-	90	34.7	9.35	32.65	140	234	Peak
10440	42.79	-31.21	74	50.7	37.26	13.71	58.88	100	0	Peak
15660	46.94	-27.06	74	48.15	40.49	15.65	57.35	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	44	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5224 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
5222	89.96	-	-	78.56	34.7	9.35	32.65	136	1	Average
5222	99.7	-	-	88.3	34.7	9.35	32.65	136	1	Peak
10440	43.43	-30.57	74	51.34	37.26	13.71	58.88	100	0	Peak
15660	46.28	-27.72	74	47.49	40.49	15.65	57.35	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5246 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
5246	91.46	-	-	80.08	34.75	9.39	32.76	126	230	Average
5246	101.5	-	-	90.12	34.75	9.39	32.76	126	230	Peak
10479	42.59	-31.41	74	50.47	37.29	13.72	58.89	100	0	Peak
15720	49.71	-24.29	74	50.72	40.57	15.69	57.27	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	48	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5244 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
5244	90.61	-	-	79.12	34.75	9.39	32.65	146	0	Average
5244	100.17	-	-	88.68	34.75	9.39	32.65	146	0	Peak
10479	43.16	-30.84	74	51.04	37.29	13.72	58.89	100	0	Peak
15720	47.86	-26.14	74	48.87	40.57	15.69	57.27	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5262 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
5262	91.15	-	-	79.7	34.77	9.44	32.76	117	240	Average
5262	101.49	-	-	90.04	34.77	9.44	32.76	117	240	Peak
10521	42.68	-31.32	74	50.48	37.32	13.72	58.84	100	0	Peak
15780	48.23	-25.77	74	49.07	40.63	15.75	57.22	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	52	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
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	90.87	-	-	79.42	34.77	9.44	32.76	100	14	Average
5260	100.63	-	-	89.18	34.77	9.44	32.76	100	14	Peak
10521	43.14	-30.86	74	50.94	37.32	13.72	58.84	100	0	Peak
15780	48.65	-25.35	74	49.49	40.63	15.75	57.22	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
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	89.67	-	-	78.34	34.82	9.48	32.97	138	235	Average
5298	99.91	-	-	88.58	34.82	9.48	32.97	138	235	Peak
10602	41.19	-32.81	74	48.65	37.42	13.73	58.61	100	0	Peak
15900	47.27	-26.73	74	47.73	40.78	15.84	57.08	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	60	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5304 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
5304	89.25	-	-	77.92	34.82	9.48	32.97	100	10	Average
5304	99.26	-	-	87.93	34.82	9.48	32.97	100	10	Peak
10602	44.19	-29.81	74	51.65	37.42	13.73	58.61	100	0	Peak
15900	47.76	-26.24	74	48.22	40.78	15.84	57.08	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5326 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
40.26	32.92	-7.08	40	50.19	13.3	0.63	31.2	133	27	Peak
42.15	32.48	-7.52	40	51.14	11.9	0.64	31.2	-	-	Peak
46.74	25.91	-14.09	40	46.64	9.8	0.67	31.2	-	-	Peak
380.5	23.56	-22.44	46	37.36	15.1	2.1	31	-	-	Peak
462.4	26.69	-19.31	46	37.73	17.43	2.33	30.8	-	-	Peak
853	27.2	-18.8	46	31.05	23.27	3.27	30.39	-	-	Peak
5326	90.98	-	-	79.7	34.84	9.52	33.08	137	235	Average
5326	100.99	-	-	89.71	34.84	9.52	33.08	137	235	Peak
10641	42.43	-31.57	74	49.75	37.47	13.73	58.52	100	0	Peak
15960	48.18	-25.82	74	48.44	40.86	15.88	57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	64	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5314 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
30.54	28.36	-11.64	40	41	18.28	0.54	31.46	-	-	Peak
44.85	30.56	-9.44	40	50.61	10.5	0.65	31.2	177	55	Peak
140.7	23.63	-19.87	43.5	42.03	11.5	1.2	31.1	-	-	Peak
426	24.48	-21.52	46	36.2	16.82	2.23	30.77	-	-	Peak
753.6	24.9	-21.1	46	30.12	22.1	3.07	30.39	-	-	Peak
853	28.16	-17.84	46	32.01	23.27	3.27	30.39	-	-	Peak
5314	90.08	-	-	78.69	34.84	9.52	32.97	187	9	Average
5314	100.15	-	-	88.76	34.84	9.52	32.97	187	9	Peak
10641	42.78	-31.22	74	50.1	37.47	13.73	58.52	100	0	Peak
15960	48.53	-25.47	74	48.79	40.86	15.88	57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5504 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
5504	89.48	-	-	78.26	35.1	9.86	33.74	103	201	Average
5504	99.95	-	-	88.73	35.1	9.86	33.74	103	201	Peak
11001	45.41	-28.59	74	51.31	37.9	13.76	57.56	100	0	Peak
16500	46.34	-27.66	74	44.78	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	100	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5496 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
5496	88.16	-	-	76.92	35.08	9.82	33.66	122	95	Average
5496	98.21	-	-	86.97	35.08	9.82	33.66	122	95	Peak
11001	44.91	-29.09	74	50.81	37.9	13.76	57.56	100	0	Peak
16500	47.77	-26.23	74	46.21	41.4	16.13	55.97	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5574 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
5574	91.31	-	-	80.17	35.14	9.92	33.92	111	203	Average
5574	101.38	-	-	90.24	35.14	9.92	33.92	111	203	Peak
11160	45.49	-28.51	74	50.92	38	13.93	57.36	100	0	Peak
16740	47.54	-26.46	74	45.48	41.88	16.23	56.05	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	116	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5576 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
5576	90.39	-	-	79.25	35.14	9.92	33.92	136	341	Average
5576	100.81	-	-	89.67	35.14	9.92	33.92	136	341	Peak
11160	44.64	-29.36	74	50.07	38	13.93	57.36	100	0	Peak
16740	47.75	-26.25	74	45.69	41.88	16.23	56.05	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5694 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
40.53	23.39	-16.61	40	40.66	13.3	0.63	31.2	-	-	Peak
146.64	22.03	-21.47	43.5	40.56	11.36	1.21	31.1	-	-	Peak
213.33	32.43	-11.07	43.5	52.89	9.23	1.38	31.07	111	11	Peak
364.4	23.6	-22.4	46	37.82	14.79	2.07	31.08	-	-	Peak
426	26.88	-19.12	46	38.6	16.82	2.23	30.77	-	-	Peak
639.5	34.14	-11.86	46	41.45	20.4	2.81	30.52	-	-	Peak
5694	89.01	-	-	77.9	35.21	10.02	34.12	106	239	Average
5694	99.4	-	-	88.29	35.21	10.02	34.12	106	239	Peak
11400	46.93	-27.07	74	51.65	38.14	14.21	57.07	100	0	Peak
17100	50.05	-23.95	74	47.43	42.32	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	23~25°C
Test Channel :	140	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5694 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
32.16	31.87	-8.13	40	44.98	17.76	0.55	31.42	142	36	Peak
76.98	22.13	-17.87	40	45.6	6.87	0.86	31.2	-	-	Peak
213.33	25.57	-17.93	43.5	46.03	9.23	1.38	31.07	-	-	Peak
404.3	19.36	-26.64	46	32.04	16.04	2.16	30.88	-	-	Peak
453.3	24.96	-21.04	46	36.08	17.33	2.31	30.76	-	-	Peak
853	28.38	-17.62	46	32.23	23.27	3.27	30.39	-	-	Peak
5694	88.02	-	-	76.91	35.21	10.02	34.12	112	0	Average
5694	98.58	-	-	87.47	35.21	10.02	34.12	112	0	Peak
11400	47.97	-26.03	74	52.69	38.14	14.21	57.07	100	0	Peak
17100	50.47	-23.53	74	47.85	42.32	16.46	56.16	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	38	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5202 MHz is fundamental signal which can be ignored. 2. 10380 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
44.31	20.15	-19.85	40	40.2	10.5	0.65	31.2	-	-	Peak
51.06	18.87	-21.13	40	41.36	8	0.71	31.2	-	-	Peak
197.94	20.11	-23.39	43.5	40.86	9.04	1.31	31.1	-	-	Peak
361.6	22.67	-23.33	46	36.97	14.74	2.06	31.1	-	-	Peak
426	26.5	-19.5	46	38.22	16.82	2.23	30.77	169	57	Peak
746.6	26.08	-19.92	46	31.3	22.13	3.05	30.4	-	-	Peak
5202	91.09	-	-	79.65	34.68	9.31	32.55	132	235	Average
5202	99.93	-	-	88.49	34.68	9.31	32.55	132	235	Peak
10380	41.56	-32.44	74	49.49	37.23	13.71	58.87	100	0	Peak
15570	47.98	-26.02	74	49.47	40.38	15.58	57.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	38	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5178 MHz is fundamental signal which can be ignored. 2. 10380 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
31.35	27.39	-12.61	40	39.99	18.28	0.54	31.42	102	10	Peak
51.06	23.36	-16.64	40	45.85	8	0.71	31.2	-	-	Peak
106.95	19.88	-23.62	43.5	39.4	10.62	1.03	31.17	-	-	Peak
426	24.02	-21.98	46	35.74	16.82	2.23	30.77	-	-	Peak
510	20.81	-25.19	46	30.88	18.1	2.47	30.64	-	-	Peak
586.3	21.74	-24.26	46	30.21	19.53	2.65	30.65	-	-	Peak
5178	90.93	-	-	79.52	34.66	9.27	32.52	113	351	Average
5178	99.62	-	-	88.21	34.66	9.27	32.52	113	351	Peak
10380	42.66	-31.34	74	50.59	37.23	13.71	58.87	100	0	Peak
15570	48.1	-25.9	74	49.59	40.38	15.58	57.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	46	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5224 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
5224	89.91	-	-	78.51	34.7	9.35	32.65	107	200	Average
5224	99.58	-	-	88.18	34.7	9.35	32.65	107	200	Peak
10461	43.03	-30.97	74	50.91	37.28	13.72	58.88	100	0	Peak
15690	47	-27	74	48.11	40.53	15.67	57.31	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	46	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5220 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
5220	88.92	-	-	77.42	34.7	9.35	32.55	100	346	Average
5220	98.53	-	-	87.03	34.7	9.35	32.55	100	346	Peak
10461	45.1	-28.9	74	52.98	37.28	13.72	58.88	100	0	Peak
15690	47.1	-26.9	74	48.21	40.53	15.67	57.31	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	54	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5264 MHz is fundamental signal which can be ignored. 2. 10539 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
5264	89.95	-	-	78.5	34.77	9.44	32.76	106	231	Average
5264	99.14	-	-	87.69	34.77	9.44	32.76	106	231	Peak
10539	43.26	-30.74	74	51	37.34	13.72	58.8	100	0	Peak
15810	47.58	-26.42	74	48.32	40.67	15.77	57.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	54	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5258 MHz is fundamental signal which can be ignored. 2. 10539 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	89.58	-	-	78.2	34.75	9.39	32.76	200	326	Average
5258	98.33	-	-	86.95	34.75	9.39	32.76	200	326	Peak
10539	42.59	-31.41	74	50.33	37.34	13.72	58.8	100	0	Peak
15810	48.24	-25.76	74	48.98	40.67	15.77	57.18	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	62	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
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
75.9	11.67	-28.33	40	35.18	6.83	0.86	31.2	-	-	Peak
126.66	12.02	-31.48	43.5	30.23	11.76	1.13	31.1	-	-	Peak
198.21	20.2	-23.3	43.5	40.95	9.04	1.31	31.1	-	-	Peak
367.9	23.38	-22.62	46	37.51	14.85	2.08	31.06	100	69	Peak
402.9	22.28	-23.72	46	35.04	15.98	2.15	30.89	-	-	Peak
546.4	21.83	-24.17	46	30.76	19.32	2.54	30.79	-	-	Peak
5302	90.05	-	-	78.72	34.82	9.48	32.97	119	184	Average
5302	99.78	-	-	88.45	34.82	9.48	32.97	119	184	Peak
10620	43.3	-30.7	74	50.7	37.44	13.73	58.57	100	0	Peak
15930	47.45	-26.55	74	47.81	40.82	15.86	57.04	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	62	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5316 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
106.95	18.96	-24.54	43.5	38.48	10.62	1.03	31.17	-	-	Peak
180.66	14.61	-28.89	43.5	35.38	8.9	1.25	30.92	-	-	Peak
238.17	14.14	-31.86	46	32.44	11.18	1.52	31	-	-	Peak
361.6	16.46	-29.54	46	30.76	14.74	2.06	31.1	-	-	Peak
548.5	20.54	-25.46	46	29.11	19.68	2.55	30.8	-	-	Peak
857.9	26.04	-19.96	46	29.92	23.22	3.28	30.38	180	58	Peak
5316	89.74	-	-	78.35	34.84	9.52	32.97	173	215	Average
5316	99.24	-	-	87.85	34.84	9.52	32.97	173	215	Peak
10620	43.93	-30.07	74	51.33	37.44	13.73	58.57	100	0	Peak
15930	48.29	-25.71	74	48.65	40.82	15.86	57.04	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	102	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5498 MHz is fundamental signal which can be ignored. 2. 16530 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
121.26	12.32	-31.18	43.5	30.87	11.44	1.11	31.1	-	-	Peak
148.8	22.49	-21.01	43.5	41.3	11.08	1.21	31.1	-	-	Peak
267.87	21.22	-24.78	46	37.47	13.12	1.63	31	-	-	Peak
560.4	21.08	-24.92	46	29.29	19.97	2.58	30.76	-	-	Peak
832.7	25.57	-20.43	46	29.78	22.92	3.23	30.36	186	55	Peak
967.8	27.62	-26.38	54	29.69	24.78	3.48	30.33	-	-	Peak
5498	88.02	-	-	76.76	35.1	9.82	33.66	124	231	Average
5498	97.46	-	-	86.2	35.1	9.82	33.66	124	231	Peak
11019	44.54	-29.46	74	50.41	37.91	13.76	57.54	100	0	Peak
16530	47.43	-26.57	74	45.8	41.47	16.14	55.98	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	102	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5518 MHz is fundamental signal which can be ignored. 2. 16530 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
68.07	22.57	-17.43	40	46.77	6.24	0.82	31.26	124	23	Peak
152.58	16.24	-27.26	43.5	35.4	10.76	1.21	31.13	-	-	Peak
291.36	14.99	-31.01	46	31.27	13.11	1.7	31.09	-	-	Peak
315.4	15.45	-30.55	46	31.3	13.35	1.8	31	-	-	Peak
800.5	24.04	-21.96	46	29.2	22	3.14	30.3	-	-	Peak
981.1	28.02	-25.98	54	29.84	24.96	3.49	30.27	-	-	Peak
5518	87.02	-	-	75.79	35.11	9.86	33.74	112	98	Average
5518	96.62	-	-	85.39	35.11	9.86	33.74	112	98	Peak
11019	46.15	-27.85	74	52.02	37.91	13.76	57.54	100	0	Peak
16530	46.34	-27.66	74	44.71	41.47	16.14	55.98	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	110	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5538 MHz is fundamental signal which can be ignored. 2. 16650 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
5538	90.4	-	-	79.23	35.12	9.88	33.83	123	231	Average
5538	99.2	-	-	88.03	35.12	9.88	33.83	123	231	Peak
11100	45.22	-28.78	74	50.83	37.96	13.87	57.44	100	0	Peak
16650	48.22	-25.78	74	46.34	41.71	16.19	56.02	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	110	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5538 MHz is fundamental signal which can be ignored. 2. 16650 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
5538	89.48	-	-	78.31	35.12	9.88	33.83	110	98	Average
5538	98.84	-	-	87.67	35.12	9.88	33.83	110	98	Peak
11100	47.28	-26.72	74	52.89	37.96	13.87	57.44	100	0	Peak
16650	49.61	-24.39	74	47.73	41.71	16.19	56.02	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	134	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Horizontal
Remark :	1. 5660 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
5660	89.6	-	-	78.52	35.19	9.98	34.09	100	193	Average
5660	98.72	-	-	87.64	35.19	9.98	34.09	100	193	Peak
11340	47.91	-26.09	74	52.8	38.1	14.16	57.15	100	0	Peak
17010	48.25	-25.75	74	45.65	42.39	16.34	56.13	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	23~25°C
Test Channel :	134	Relative Humidity :	44~48%
Test Engineer :	Stan Hsieh	Polarization :	Vertical
Remark :	1. 5674 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
5674	88.73	-	-	77.62	35.2	10	34.09	158	348	Average
5674	97.65	-	-	86.54	35.2	10	34.09	158	348	Peak
11340	48.02	-25.98	74	52.91	38.1	14.16	57.15	100	0	Peak
17010	48.3	-25.7	74	45.7	42.39	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 (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

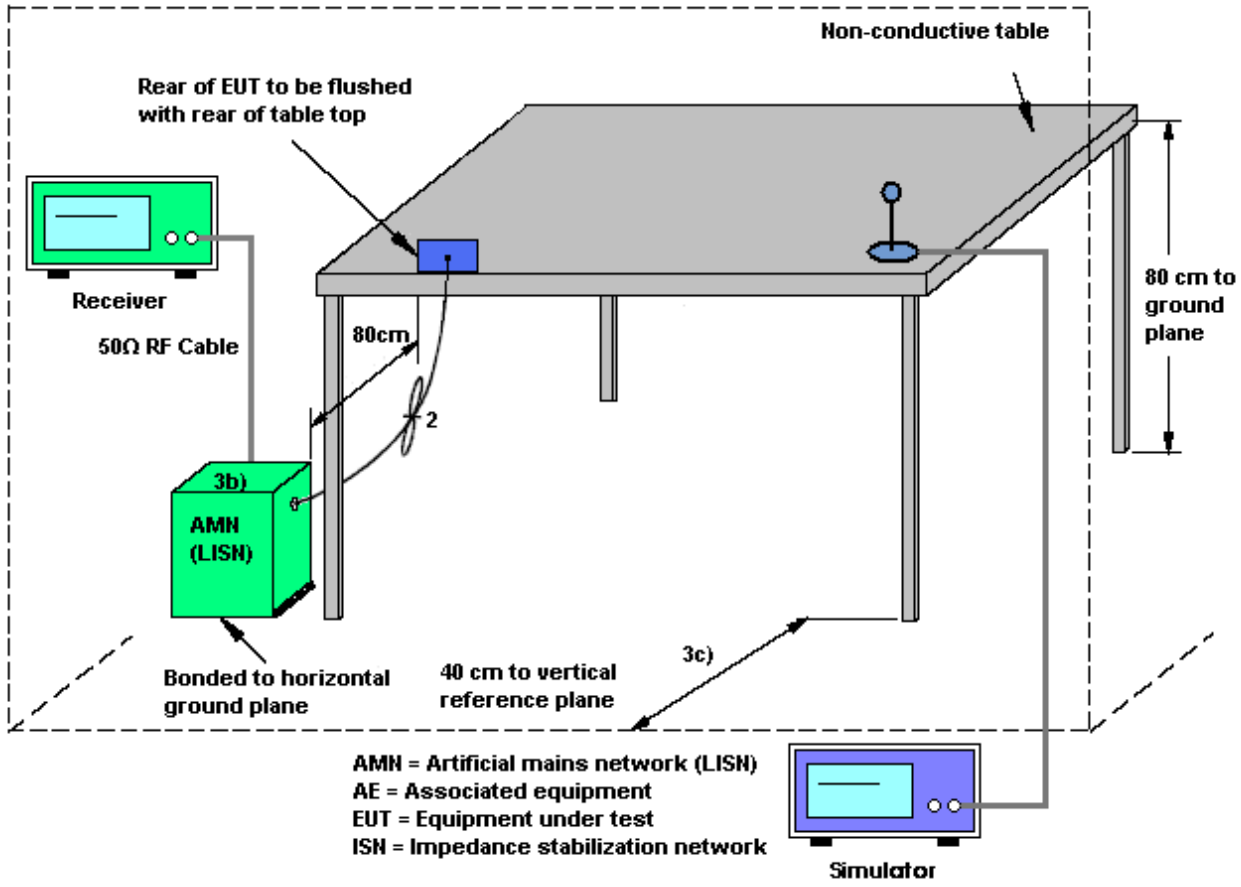
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

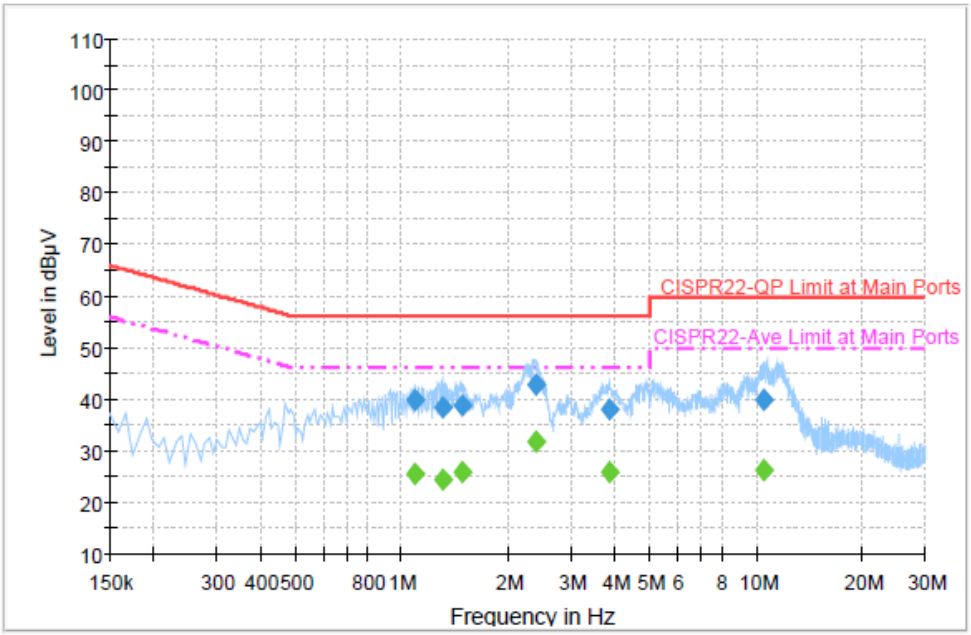
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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 :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter)		



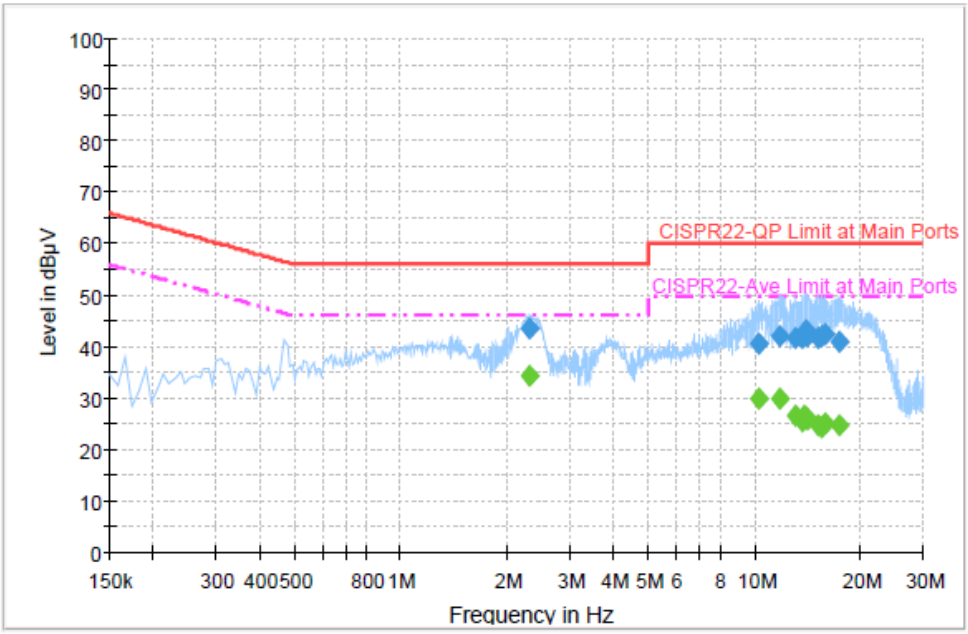
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.086000	39.8	Off	L1	19.5	16.2	56.0
1.302000	38.3	Off	L1	19.5	17.7	56.0
1.486000	38.7	Off	L1	19.5	17.3	56.0
2.390000	42.8	Off	L1	19.5	13.2	56.0
3.846000	38.0	Off	L1	19.5	18.0	56.0
10.566000	40.0	Off	L1	19.7	20.0	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.086000	25.7	Off	L1	19.5	20.3	46.0
1.302000	24.4	Off	L1	19.5	21.6	46.0
1.486000	25.8	Off	L1	19.5	20.2	46.0
2.390000	31.8	Off	L1	19.5	14.2	46.0
3.846000	25.7	Off	L1	19.5	20.3	46.0
10.566000	26.4	Off	L1	19.7	23.6	50.0

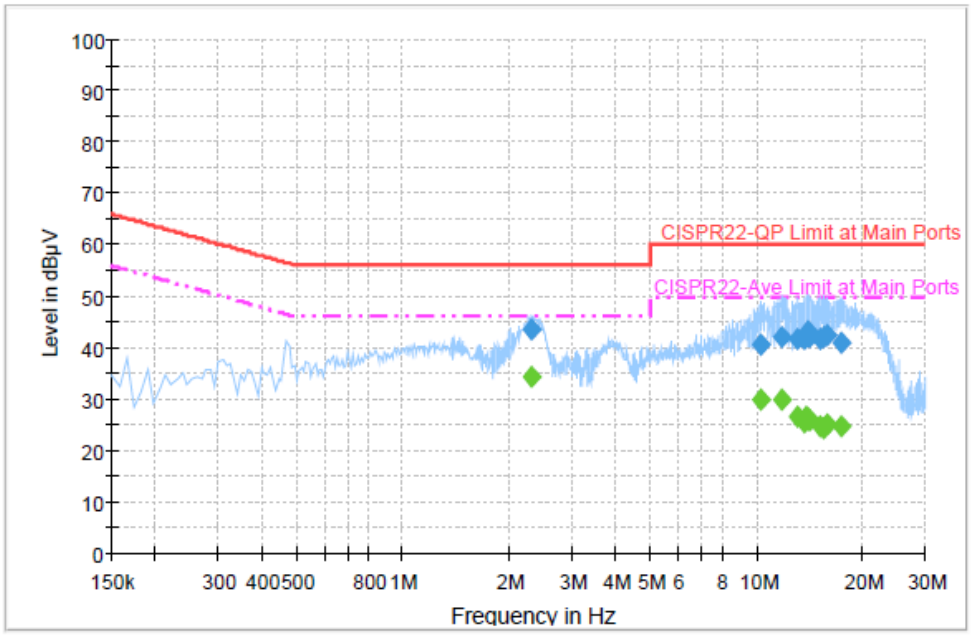
Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.318000	43.5	Off	N	19.5	12.5	56.0
10.270000	40.6	Off	N	19.7	19.4	60.0
11.766000	41.9	Off	N	19.7	18.1	60.0
13.014000	41.6	Off	N	19.8	18.4	60.0
13.630000	41.7	Off	N	19.8	18.3	60.0
13.838000	42.5	Off	N	19.8	17.5	60.0
14.046000	43.1	Off	N	19.8	16.9	60.0
14.222000	41.9	Off	N	19.8	18.1	60.0
15.062000	41.7	Off	N	19.8	18.3	60.0
15.462000	41.9	Off	N	19.9	18.1	60.0
15.870000	42.3	Off	N	19.9	17.7	60.0
17.278000	40.9	Off	N	19.9	19.1	60.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter)		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.318000	34.5	Off	N	19.5	11.5	46.0
10.270000	29.7	Off	N	19.7	20.3	50.0
11.766000	29.9	Off	N	19.7	20.1	50.0
13.014000	26.7	Off	N	19.8	23.3	50.0
13.630000	25.6	Off	N	19.8	24.4	50.0
13.838000	26.8	Off	N	19.8	23.2	50.0
14.046000	26.4	Off	N	19.8	23.6	50.0
14.222000	25.7	Off	N	19.8	24.3	50.0
15.062000	24.8	Off	N	19.8	25.2	50.0
15.462000	24.3	Off	N	19.9	25.7	50.0
15.870000	25.0	Off	N	19.9	25.0	50.0
17.278000	24.7	Off	N	19.9	25.3	50.0

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.

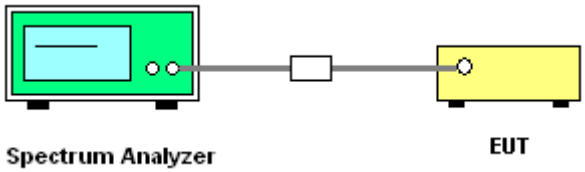
3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 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	Test Engineer :	Stuart Lin and Bill Kuo

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (˚C)	Voltage (V)
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.6
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	4.2
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.7
11a	6Mbps	1	36	5180	5180.025	0.025	4.83	-10	3.7
11a	6Mbps	1	36	5180	5179.950	-0.050	-9.65	55	3.7

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (˚C)	Voltage (V)
11a	6Mbps	1	64	5320	5319.950	-0.050	-9.40	20	3.6
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	4.2
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.7
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	-10	3.7
11a	6Mbps	1	64	5320	5319.950	-0.050	-9.40	55	3.7

Mod.	Data Rate	NTX	Channel	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (˚C)	Voltage (V)
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	20	3.6
11a	6Mbps	1	100	5500	5499.950	-0.050	-9.09	20	4.2
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.7
11a	6Mbps	1	100	5500	5500.050	0.050	9.09	-10	3.7
11a	6Mbps	1	100	5500	5499.950	-0.050	-9.09	55	3.7

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

The measuring equipment is listed in the section 4 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 Anti-Replacement Construction

An embedded-in antenna design is used.

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 Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz~40GHz	Oct. 23, 2013	May 21, 2014 ~ Jun. 10, 2014	Oct. 22, 2015	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Aug. 17, 2013	May 21, 2014 ~ Jun. 10, 2014	Aug. 16, 2014	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 17, 2013	May 21, 2014 ~ Jun. 10, 2014	Aug. 16, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Jun. 19, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Jun. 19, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Jun. 19, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 19, 2014	N/A	Conduction (CO05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV30	101749	10Hz ~ 30GHz	Feb. 10, 2014	Jun. 23, 2014 ~ Jun. 25, 2014	Feb. 09, 2015	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 06, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Sep. 05, 2014	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MhZ	Jul. 03, 2012	Jun. 23, 2014 ~ Jun. 25, 2014	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Oct. 09, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Aug. 21, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 03, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Oct. 02, 2014	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10 MHz ~ 1000MHz	Mar. 17, 2014	Jun. 23, 2014 ~ Jun. 25, 2014	Mar. 16, 2015	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Nov. 28, 2014	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	DC~18 G	Jul. 09, 2013	Jun. 23, 2014 ~ Jun. 25, 2014	Jul. 08, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jun. 23, 2014 ~ Jun. 25, 2014	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Jun. 23, 2014 ~ Jun. 25, 2014	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**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.50**