Partial FCC Test Report

Report No.:	RF160613C32-2
FCC ID:	PPD-QCNFA364AH
Test Model:	QCNFA364A
Received Date:	Jun. 03, 2016
Test Date:	Jun. 03, 2016 ~ Jun. 04, 2016
Issued Date:	Jun. 15, 2016
Applicant:	Qualcomm Atheros, Inc.
Address:	1700 Technology Dr San Jose, CA 95110
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location (1):	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Test Location (2):	No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C

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Release Control Record

Issue No.	Description	Date Issued
RF160613C32-2	Original Release	Jun. 15, 2016

1 Certificate of Conformity

Product:	802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card
Brand:	Qualcomm Atheros
Test Model:	QCNFA364A
Sample Status:	Production Unit
Applicant:	Qualcomm Atheros, Inc.
Test Date:	Jun. 03, 2016 ~ Jun. 04, 2016
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Evonne Liu , **Date:** Jun. 15, 2016

Evonne Liu / Specialist

Approved by : Stanley Wu , **Date:** Jun. 15, 2016

Stanley Wu / Assistant Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.207	AC Power Conducted Emission	N/A	Refer to Note
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.04 dB at 2390 MHz.
15.247(d)	Antenna Port Emission	N/A	Refer to Note
15.247(a)(2)	6 dB Bandwidth	N/A	Refer to Note
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	N/A	Refer to Note
15.203	Antenna Requirement	N/A	Refer to Note

Note: Only test item of Maximum Output Power and Radiated Emissions were performed for this report and the conducted data is referring to module report (Report No.: RF150107E07, Issue Date: Mar. 04, 2015).

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:
The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	**Frequency**	**Expended Uncertainty (k=2) (±)**
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card
Brand	Qualcomm Atheros
Test Model	QCNFA364A
Status of EUT	Production Unit
Power Supply Rating	3.3 Vdc (host equipment)
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: 11.0 / 5.5 / 2.0 / 1.0 Mbps 802.11g: 54.0 / 48.0 / 36.0 / 24.0 / 18.0 / 12.0 / 9.0 / 6.0 Mbps 802.11n: up to MCS7
Operating Frequency	2412 ~ 2462 MHz
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	420.233 mW
Antenna Type	Refer to Note as below
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT was installed in Portable Computer (Brand: Dell, Model: P56F).
2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	TX Function
802.11b	2TX
802.11g	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX

3. The antenna information is listed as below.

Antenna Type	Manuf.	Part Number	Antenna Gain (dBi)			
			2.4GHz	5.3 GHz	5.6 GHz	5.8 GHz
PIFA	ACON	WLAN Main Antenna: APL6Y-700002 WLAN Aux. Antenna: APL6Y-700002	Main: 1.01 Aux.: -0.07	Main: 2.77 Aux.: 0.97	Main: 1.65 Aux.: 1.72	Main: 1.65 Aux.: 1.72
	TE	WLAN Main Antenna: 1556723-1 WLAN Aux. Antenna: 1556723-1	Main: -2.24 Aux.: -1.97	Main: -0.33 Aux.: -2.98	Main: -3.26 Aux.: -2.22	Main: -2.40 Aux.: -2.22

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

7 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	-	-	-

Where **RE≥1G:** Radiated Emission above 1 GHz **RE<1G:** Radiated Emission below 1 GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE: "-"means no effect.

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	MCS0
-	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0

Radiated Emission Test (Below 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11n (HT20)	1 to 11	1	OFDM	BPSK	MCS0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

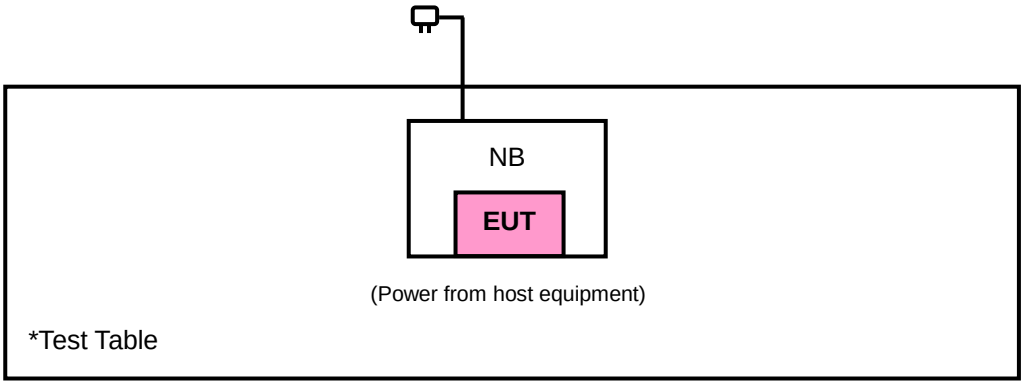
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	NB	N/A	N/A	N/A	N/A

No.	Signal Cable Description Of The Above Support Units
1.	N/A

Note:

1. All power cords of the above support units are non-shielded (1.8m).

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.247)
558074 D01 DTS Meas Guidance v03r05
662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (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:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY50010135	Jul. 18, 2015	Jul. 17, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2015	Dec. 16, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna ETS-Lindgren	3117	00143293	Jan. 19, 2016	Jan. 18, 2017
Bluetooth Tester	CBT	100980	Apr. 27, 2015	Apr. 26, 2017
Loop Antenna	EM-6879	269	Jul. 31, 2015	Jul. 30, 2016
Agilent Communications Tester-Wireless	8960 Series 10	MY53201073	Jul. 03, 2015	Jul. 02, 2017
Preamplifier Agilent	310N	187226	Jun. 29, 2015	Jun. 28, 2016
Preamplifier Agilent	83017A	MY39501357	Jun. 29, 2015	Jun. 28, 2016
Power Meter Anritsu	ML2495A	1232002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor Anritsu	MA2411B	1207325	Sep. 21, 2015	Sep. 20, 2016
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 27, 2015	Jun. 26, 2016
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 27, 2015	Jun. 26, 2016
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The FCC Site Registration No. is 149147.
5. The IC Site Registration No. is IC7450I-1.

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

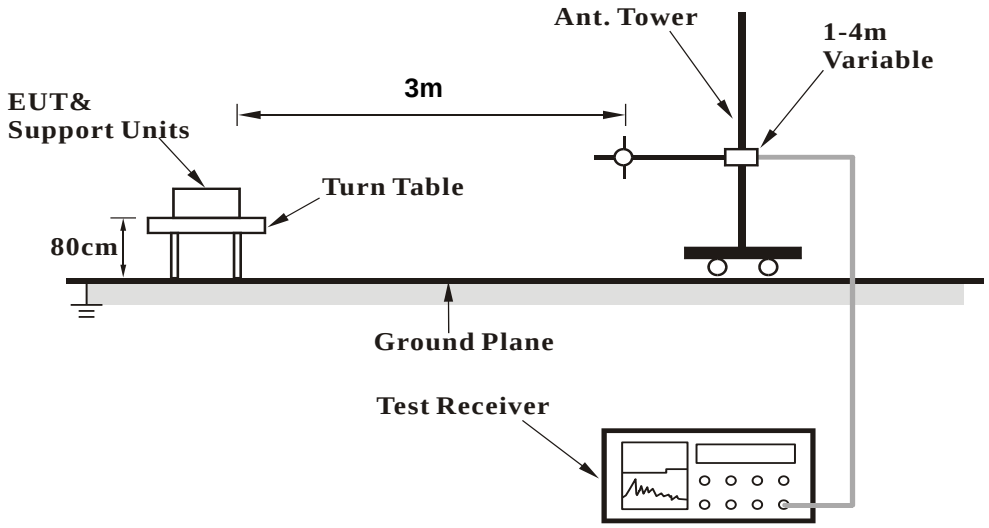
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

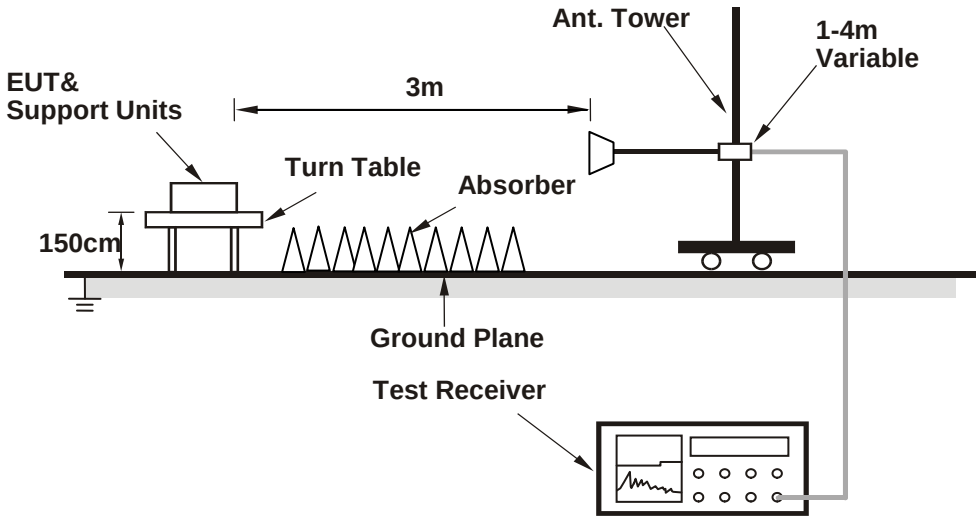
No deviation.

4.1.5 Test Set Up

<Frequency Range below 1 GHz>



<Frequency Range above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

a. Placed the EUT on a testing table.
b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

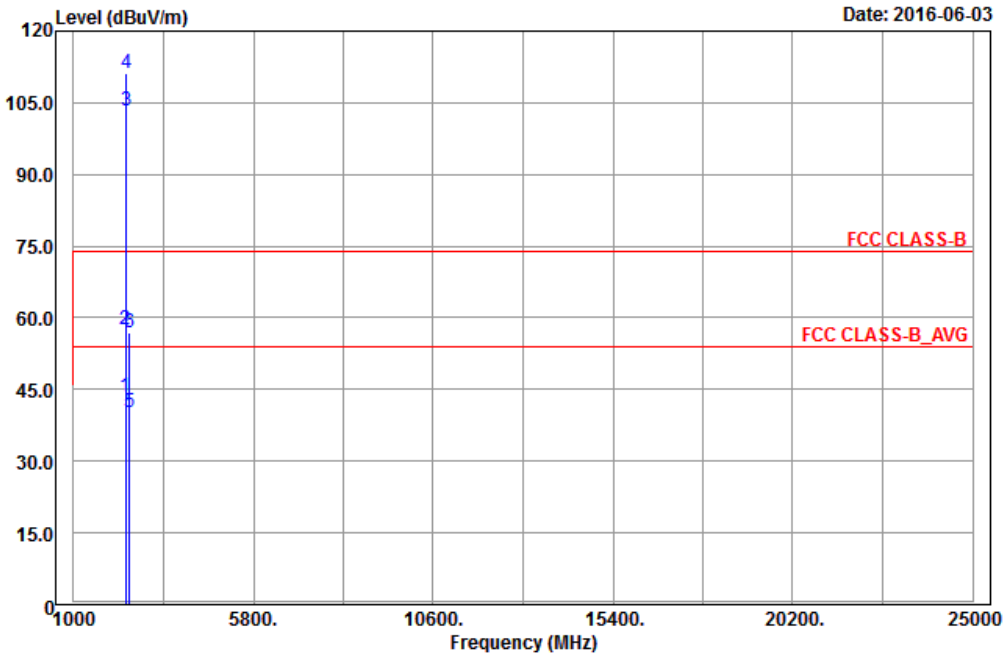
4.1.7 Test Results

Above 1 GHz Data：

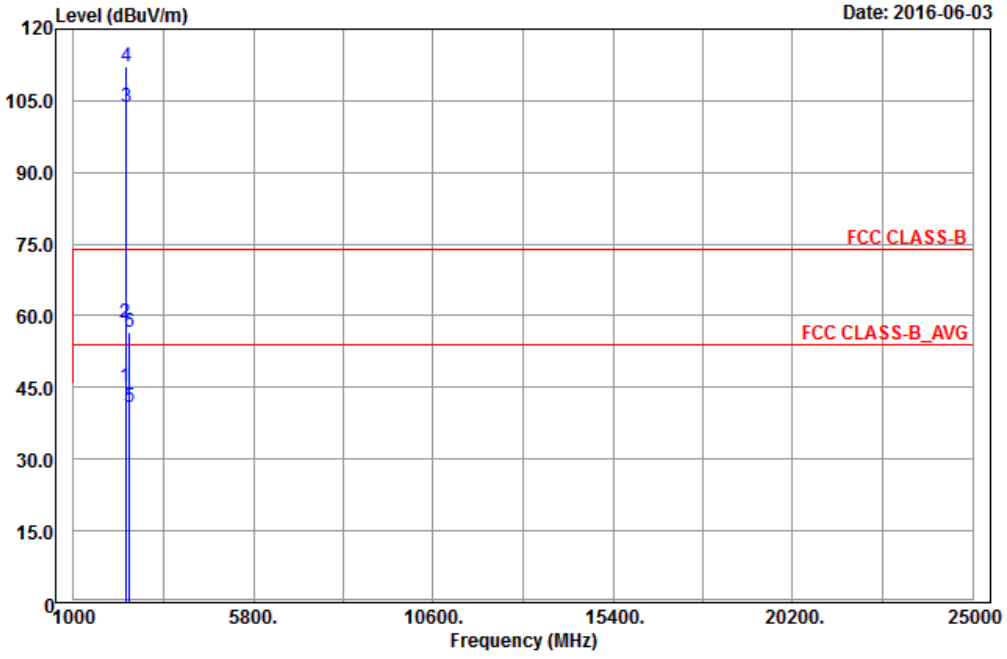
802.11b

EUT Test Condition		Measurement Detail	
Channel	Channel 1	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



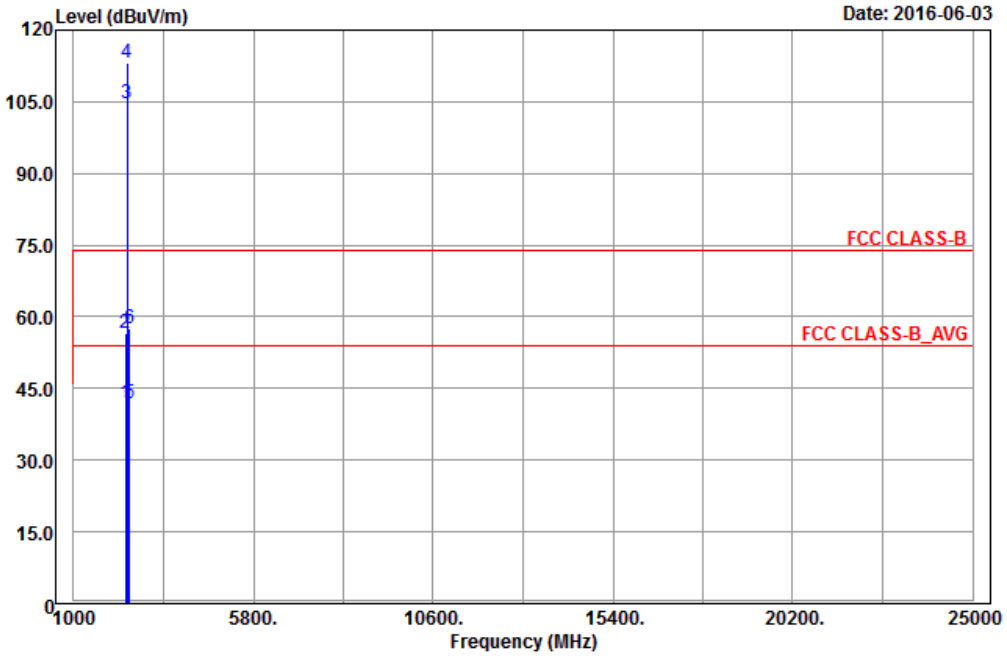
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	43.57	41.84	54	-10.43	31.8	5.4	35.47	119	239	Average
2390	57.45	55.72	74	-16.55	31.8	5.4	35.47	119	239	Peak
2412	103.19	101.42			31.81	5.43	35.47	119	239	Average
2412	111.17	109.4			31.81	5.43	35.47	119	239	Peak
2494	40.13	38.11	54	-13.87	31.9	5.53	35.41	119	239	Average
2494	56.8	54.78	74	-17.2	31.9	5.53	35.41	119	239	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388	45.27	43.56	54	-8.73	31.8	5.4	35.49	263	326	Average
2388	58.56	56.85	74	-15.44	31.8	5.4	35.49	263	326	Peak
2412	103.6	101.83			31.81	5.43	35.47	274	351	Average
2412	112.26	110.49			31.81	5.43	35.47	274	351	Peak
2496	40.86	38.84	54	-13.14	31.9	5.53	35.41	274	351	Average
2496	56.63	54.61	74	-17.37	31.9	5.53	35.41	274	351	Peak

Remarks:

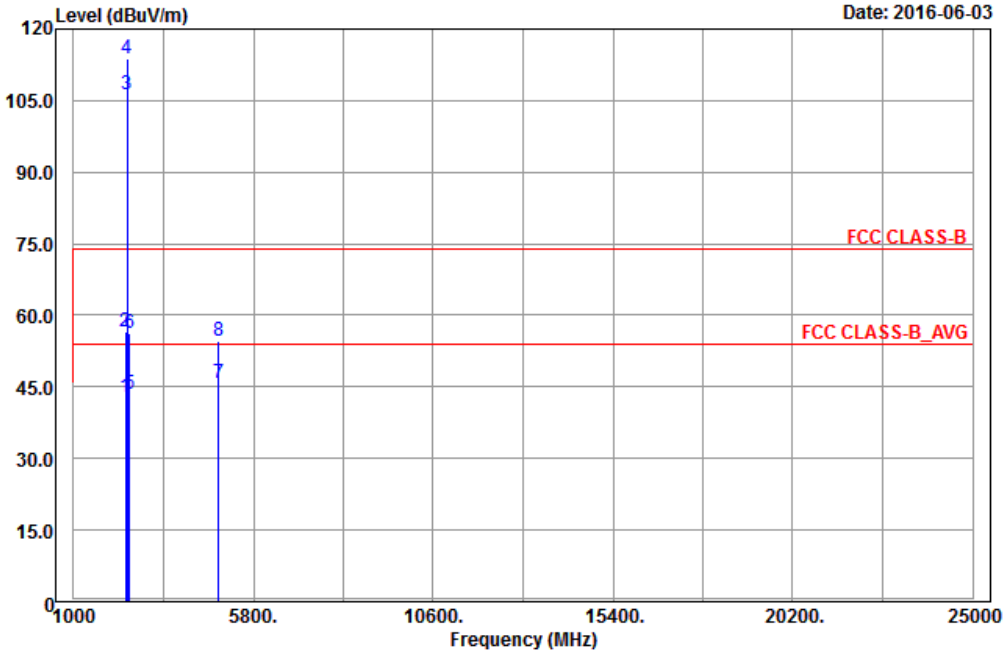
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 6	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



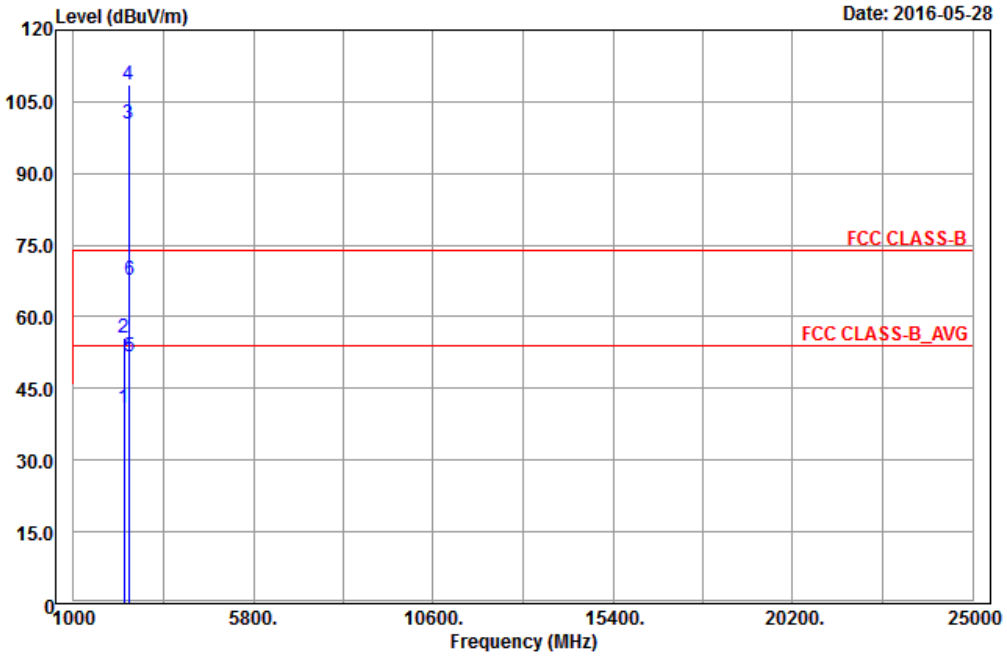
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	41.81	40.08	54	-12.19	31.8	5.4	35.47	246	241	Average
2390	56.6	54.87	74	-17.4	31.8	5.4	35.47	246	241	Peak
2437	104.69	102.84			31.85	5.46	35.46	246	241	Average
2437	112.99	111.14			31.85	5.46	35.46	246	241	Peak
2486	41.8	39.81	54	-12.2	31.88	5.53	35.42	246	241	Average
2486	57.4	55.41	74	-16.6	31.88	5.53	35.42	246	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388	42.7	40.99	54	-11.3	31.8	5.4	35.49	267	351	Average
2388	56.53	54.82	74	-17.47	31.8	5.4	35.49	267	351	Peak
2437	106.17	104.32			31.85	5.46	35.46	267	351	Average
2437	113.79	111.94			31.85	5.46	35.46	267	351	Peak
2486	43.47	41.48	54	-10.53	31.88	5.53	35.42	267	351	Average
2486	56.38	54.39	74	-17.62	31.88	5.53	35.42	267	351	Peak
4874	45.74	37.55	54	-8.26	33.98	8.27	34.06	204	278	Average
4874	54.58	46.39	74	-19.42	33.98	8.27	34.06	204	278	Peak

Remarks:

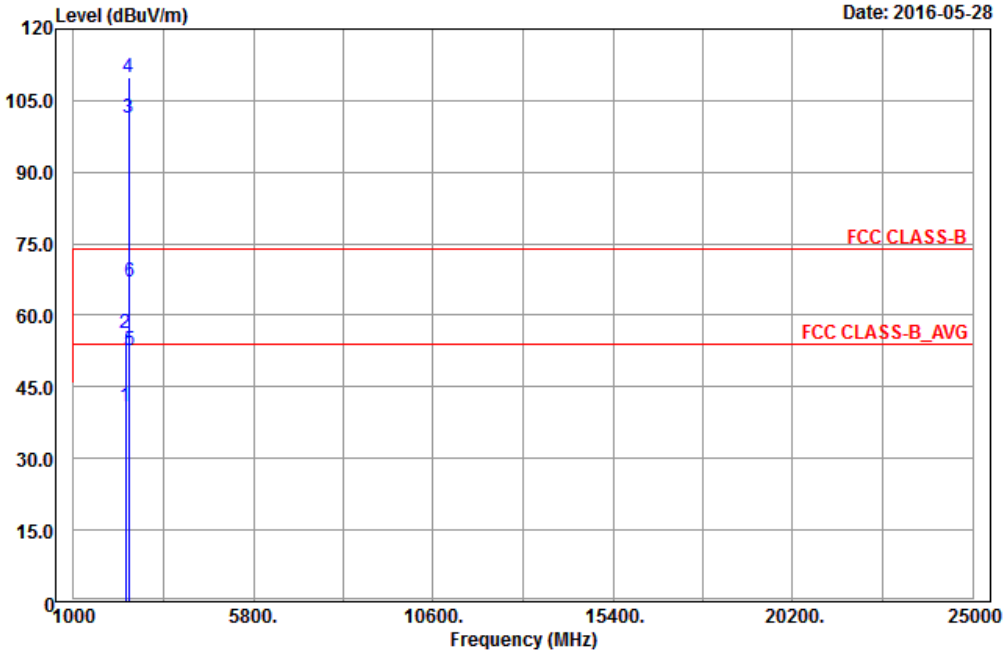
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 11	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2354	40.81	39.22	54	-13.19	31.76	5.33	35.5	128	288	Average
2354	55.71	54.12	74	-18.29	31.76	5.33	35.5	128	288	Peak
2462	100.28	98.35			31.87	5.5	35.44	128	288	Average
2462	108.54	106.61			31.87	5.5	35.44	128	288	Peak
2484	51.74	49.78	54	-2.26	31.88	5.5	35.42	128	288	Average
2484	67.84	65.88	74	-6.16	31.88	5.5	35.42	128	288	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2384	40.88	39.19	54	-13.12	31.78	5.4	35.49	294	23	Average
2384	56.18	54.49	74	-17.82	31.78	5.4	35.49	294	23	Peak
2462	101.29	99.36			31.87	5.5	35.44	294	23	Average
2462	109.75	107.82			31.87	5.5	35.44	294	23	Peak
2484	52.74	50.78	54	-1.26	31.88	5.5	35.42	268	64	Average
2484	67.18	65.22	74	-6.82	31.88	5.5	35.42	268	64	Peak

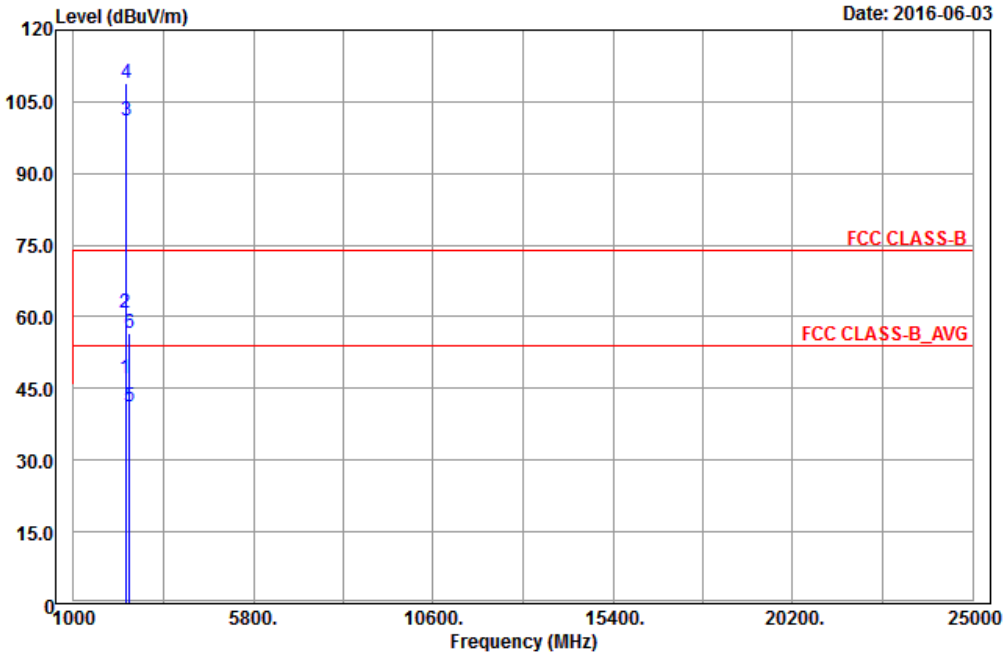
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.

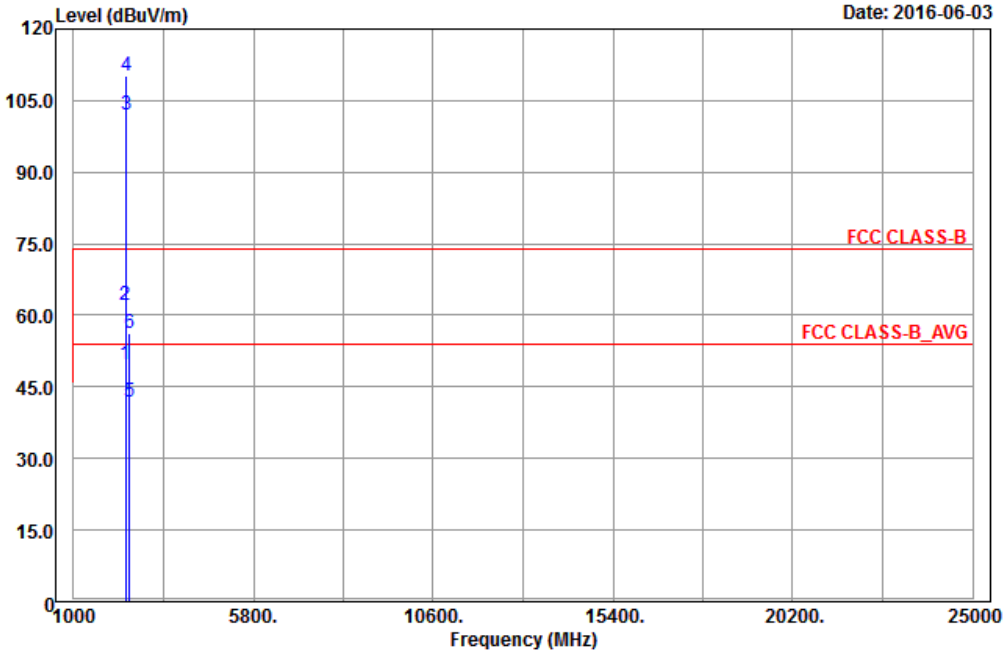
802.11g

EUT Test Condition		Measurement Detail	
Channel	Channel 1	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



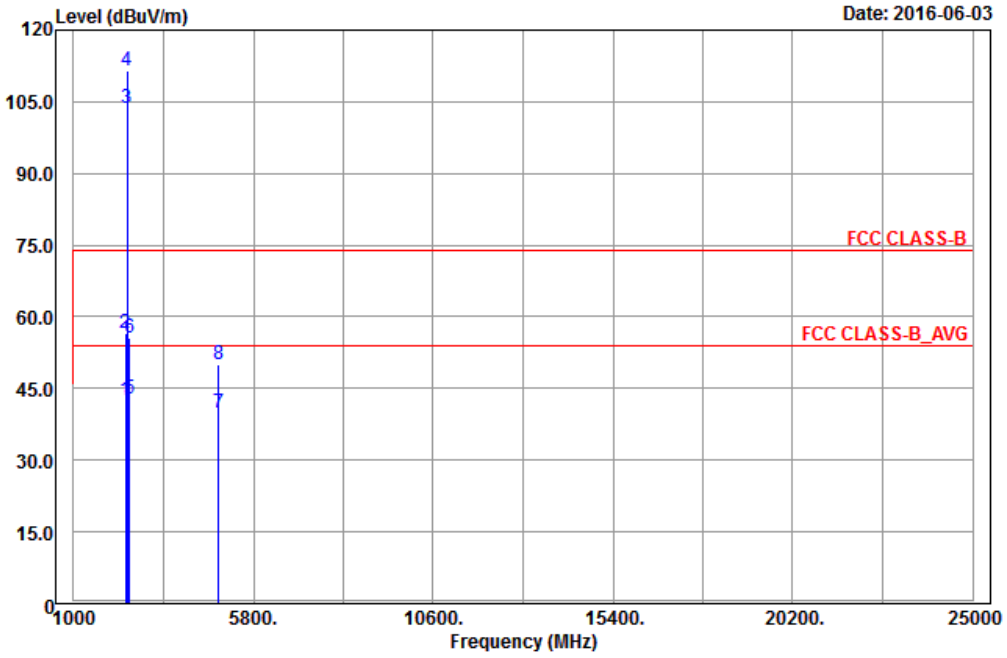
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	47.08	45.35	54	-6.92	31.8	5.4	35.47	230	241	Average
2390	60.75	59.02	74	-13.25	31.8	5.4	35.47	230	241	Peak
2412	101.11	99.34			31.81	5.43	35.47	230	241	Average
2412	108.72	106.95			31.81	5.43	35.47	230	241	Peak
2492	41.29	39.27	54	-12.71	31.9	5.53	35.41	230	241	Average
2492	56.59	54.57	74	-17.41	31.9	5.53	35.41	230	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	49.81	48.08	54	-4.19	31.8	5.4	35.47	250	348	Average
2390	62.13	60.4	74	-11.87	31.8	5.4	35.47	250	348	Peak
2412	102.05	100.28			31.81	5.43	35.47	271	348	Average
2412	110.14	108.37			31.81	5.43	35.47	271	348	Peak
2490	41.7	39.69	54	-12.3	31.9	5.53	35.42	271	348	Average
2490	56.09	54.08	74	-17.91	31.9	5.53	35.42	271	348	Peak

Remarks:

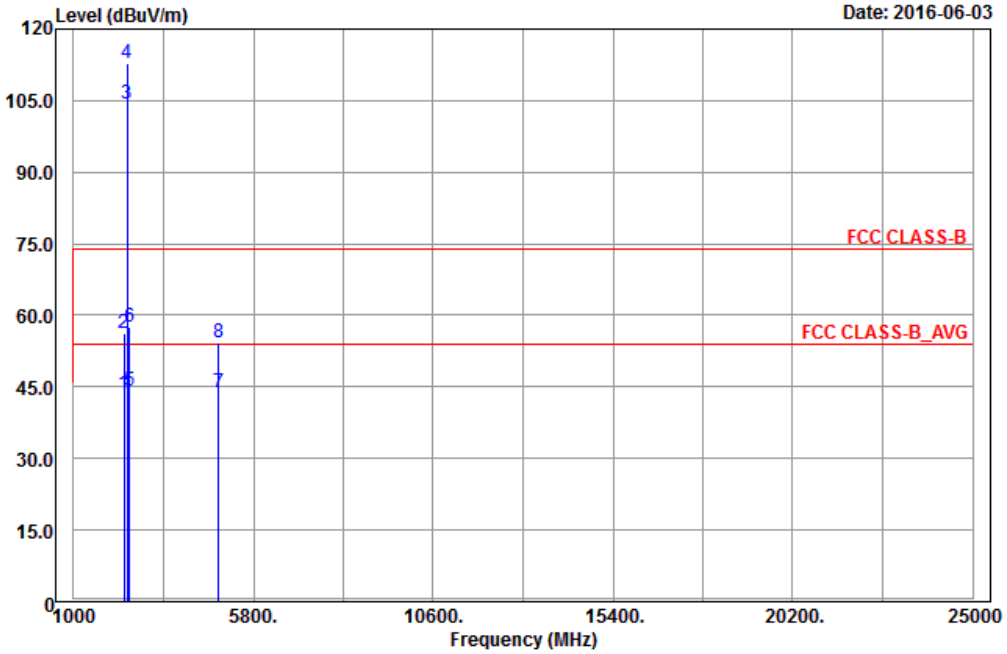
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 6	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



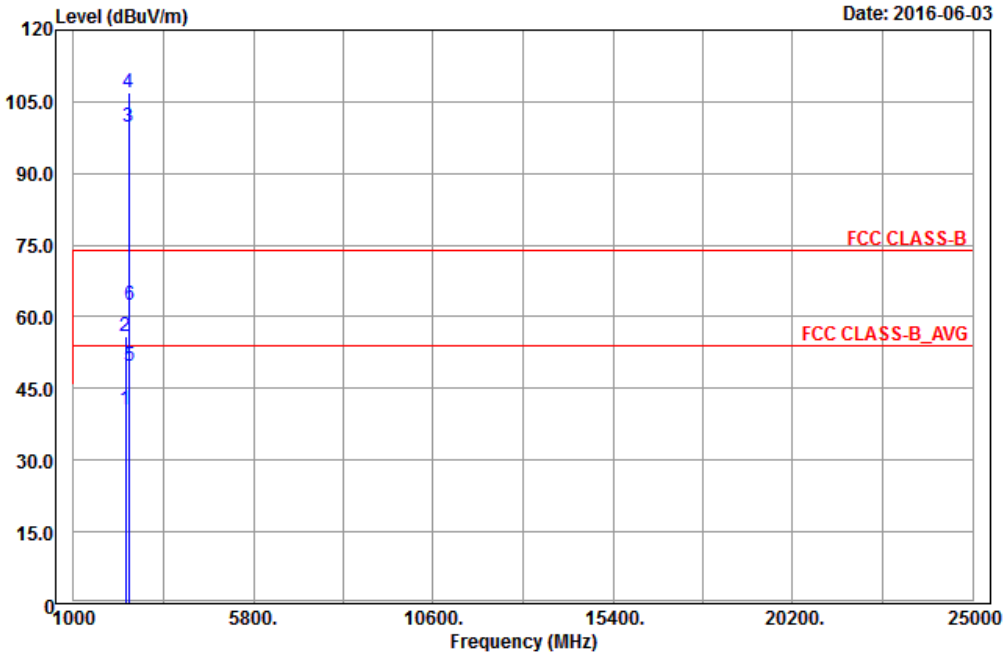
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388	42.4	40.69	54	-11.6	31.8	5.4	35.49	246	241	Average
2388	56.47	54.76	74	-17.53	31.8	5.4	35.49	246	241	Peak
2437	103.63	101.78			31.85	5.46	35.46	246	241	Average
2437	111.34	109.49			31.85	5.46	35.46	246	241	Peak
2498	42.77	40.75	54	-11.23	31.9	5.53	35.41	246	241	Average
2498	55.6	53.58	74	-18.4	31.9	5.53	35.41	246	241	Peak
4874	39.91	31.72	54	-14.09	33.98	8.27	34.06	123	11	Average
4874	49.96	41.77	74	-24.04	33.98	8.27	34.06	123	11	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2352	43.65	42.06	54	-10.35	31.76	5.33	35.5	267	351	Average
2352	56.38	54.79	74	-17.62	31.76	5.33	35.5	267	351	Peak
2437	104.33	102.48			31.85	5.46	35.46	267	351	Average
2437	112.8	110.95			31.85	5.46	35.46	267	351	Peak
2486	44.3	42.31	54	-9.7	31.88	5.53	35.42	267	351	Average
2486	57.56	55.57	74	-16.44	31.88	5.53	35.42	267	351	Peak
4874	43.66	35.47	54	-10.34	33.98	8.27	34.06	110	344	Average
4874	54.43	46.24	74	-19.57	33.98	8.27	34.06	110	344	Peak

Remarks:

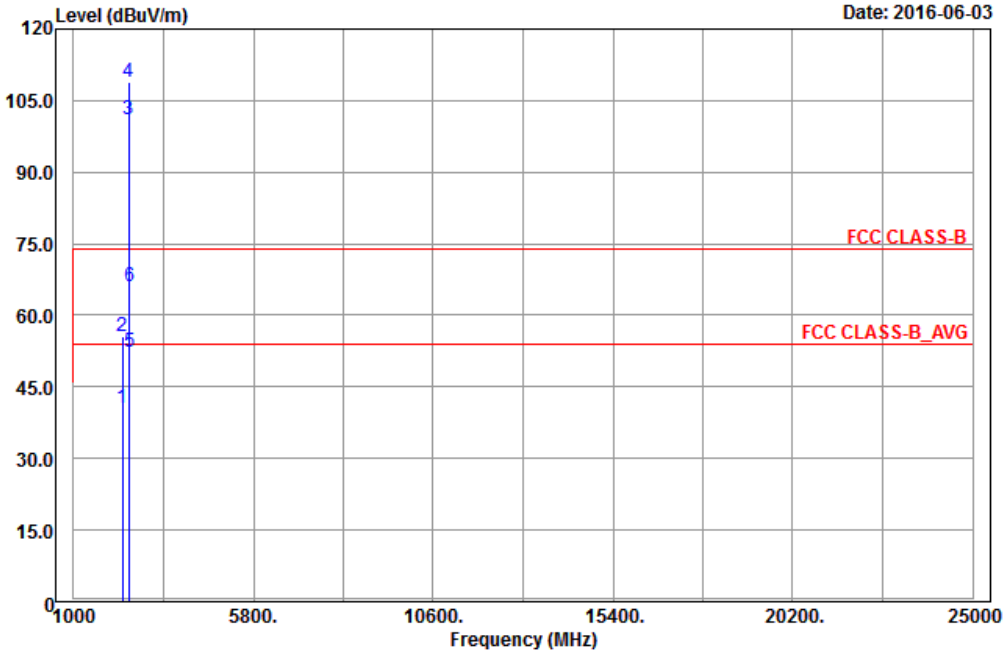
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 11	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388	40.61	38.9	54	-13.39	31.8	5.4	35.49	267	241	Average
2388	55.82	54.11	74	-18.18	31.8	5.4	35.49	267	241	Peak
2462	99.84	97.91			31.87	5.5	35.44	267	241	Average
2462	106.99	105.06			31.87	5.5	35.44	267	241	Peak
2484	49.62	47.66	54	-4.38	31.88	5.5	35.42	267	241	Average
2484	62.61	60.65	74	-11.39	31.88	5.5	35.42	267	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2314	40.61	39.12	54	-13.39	31.71	5.3	35.52	294	343	Average
2314	55.5	54.01	74	-18.5	31.71	5.3	35.52	294	343	Peak
2462	101.12	99.19			31.87	5.5	35.44	294	343	Average
2462	108.74	106.81			31.87	5.5	35.44	294	343	Peak
2484	52.32	50.36	54	-1.68	31.88	5.5	35.42	277	348	Average
2484	65.93	63.97	74	-8.07	31.88	5.5	35.42	277	348	Peak

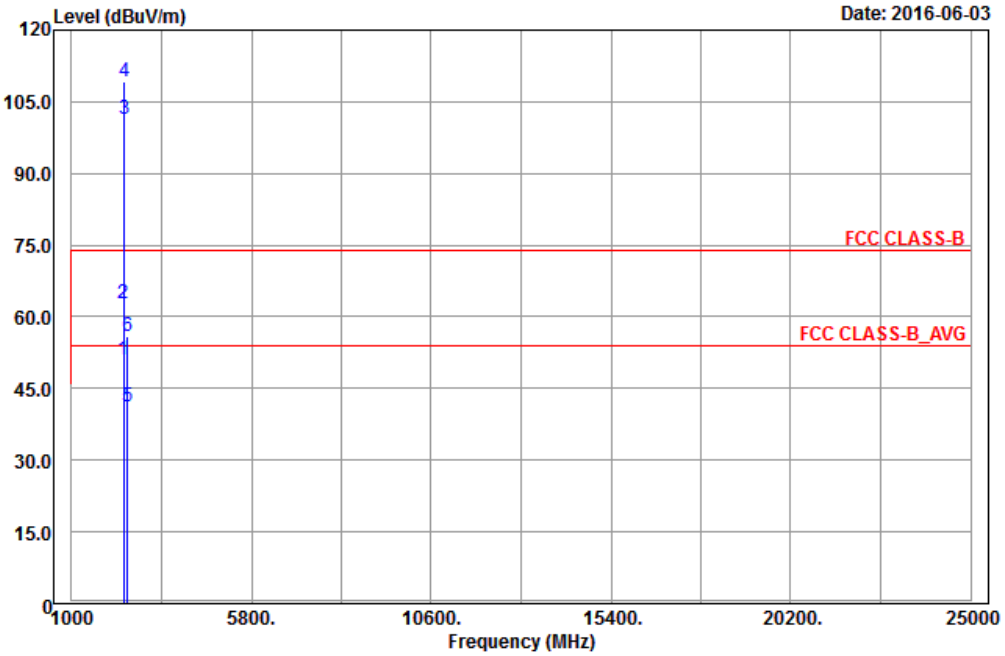
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.

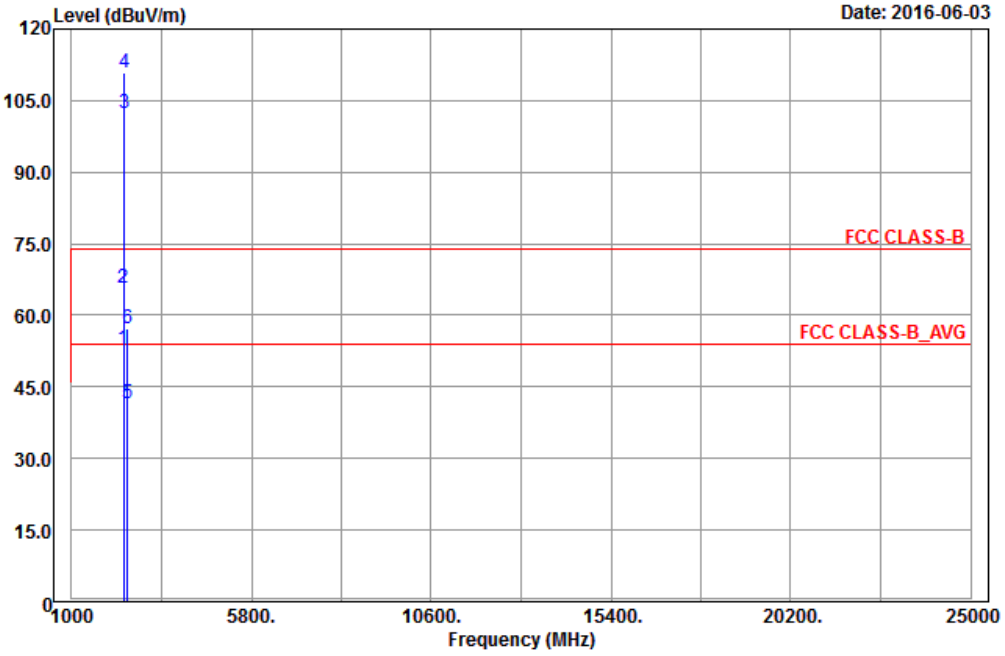
802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 1	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



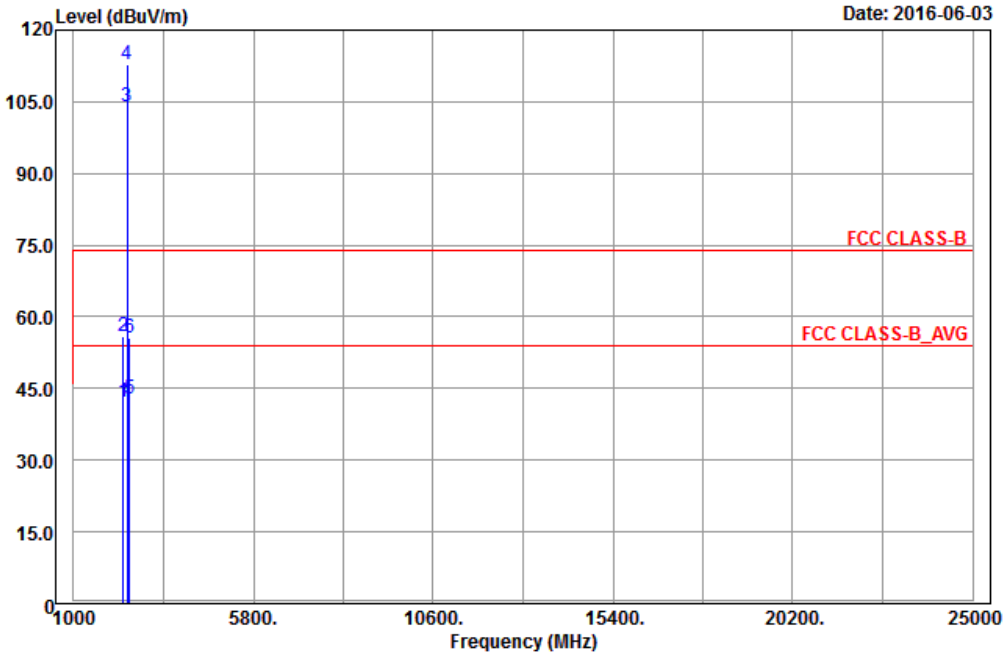
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	50.89	49.16	54	-3.11	31.8	5.4	35.47	230	241	Average
2390	62.87	61.14	74	-11.13	31.8	5.4	35.47	230	241	Peak
2412	101.4	99.63			31.81	5.43	35.47	230	241	Average
2412	109.33	107.56			31.81	5.43	35.47	230	241	Peak
2500	41.13	39.11	54	-12.87	31.9	5.53	35.41	230	241	Average
2500	55.99	53.97	74	-18.01	31.9	5.53	35.41	230	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	52.96	51.23	54	-1.04	31.8	5.4	35.47	271	348	Average
2390	65.66	63.93	74	-8.34	31.8	5.4	35.47	248	348	Peak
2412	102.47	100.7			31.81	5.43	35.47	271	348	Average
2412	110.81	109.04			31.81	5.43	35.47	271	348	Peak
2488	41.67	39.66	54	-12.33	31.9	5.53	35.42	271	348	Average
2488	57.1	55.09	74	-16.9	31.9	5.53	35.42	271	348	Peak

Remarks:

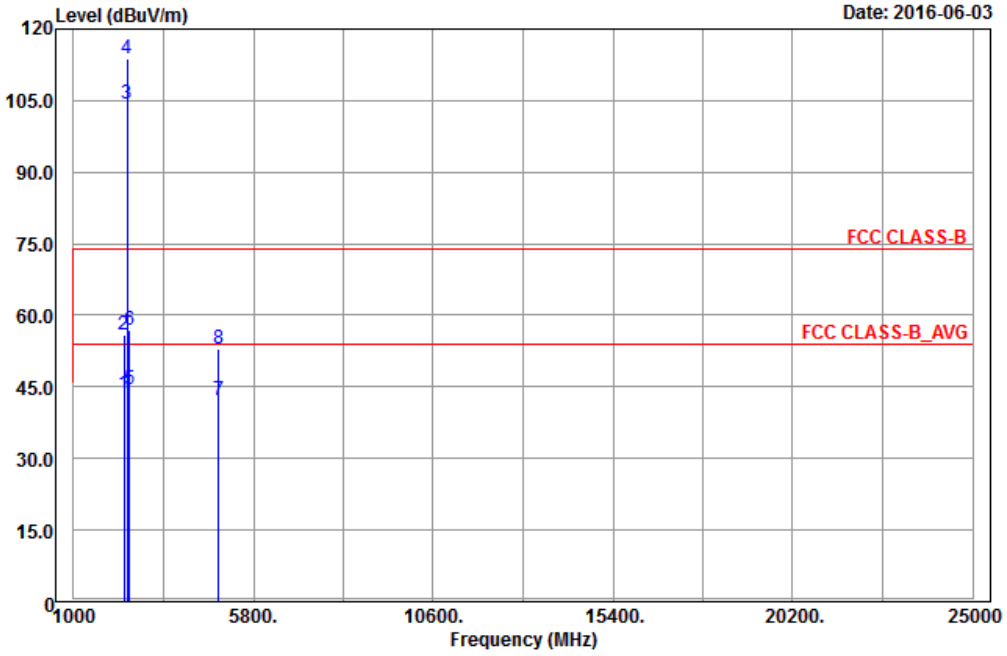
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 6	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



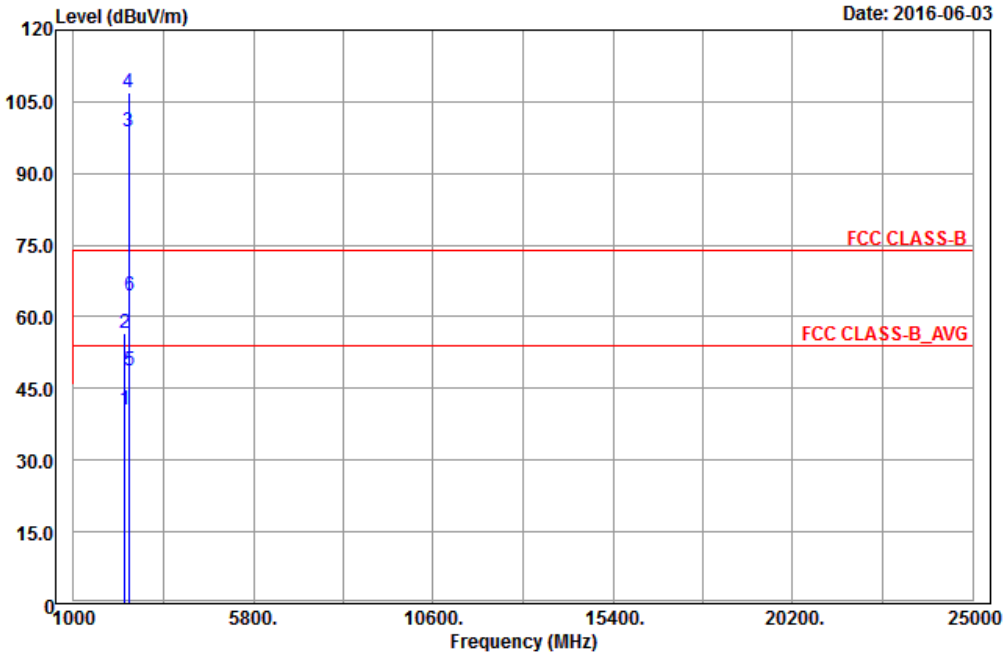
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2322	42.26	40.75	54	-11.74	31.73	5.3	35.52	246	241	Average
2322	55.94	54.43	74	-18.06	31.73	5.3	35.52	246	241	Peak
2437	104.02	102.17			31.85	5.46	35.46	246	241	Average
2437	112.78	110.93			31.85	5.46	35.46	246	241	Peak
2496	42.75	40.73	54	-11.25	31.9	5.53	35.41	246	241	Average
2496	55.74	53.72	74	-18.26	31.9	5.53	35.41	246	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2340	43.63	42.06	54	-10.37	31.74	5.33	35.5	267	351	Average
2340	55.92	54.35	74	-18.08	31.74	5.33	35.5	267	351	Peak
2437	104.42	102.57			31.85	5.46	35.46	267	351	Average
2437	113.8	111.95			31.85	5.46	35.46	267	351	Peak
2494	44.39	42.37	54	-9.61	31.9	5.53	35.41	267	351	Average
2494	56.82	54.8	74	-17.18	31.9	5.53	35.41	267	351	Peak
4874	42.15	33.96	54	-11.85	33.98	8.27	34.06	182	329	Average
4874	52.98	44.79	74	-21.02	33.98	8.27	34.06	182	329	Peak

Remarks:

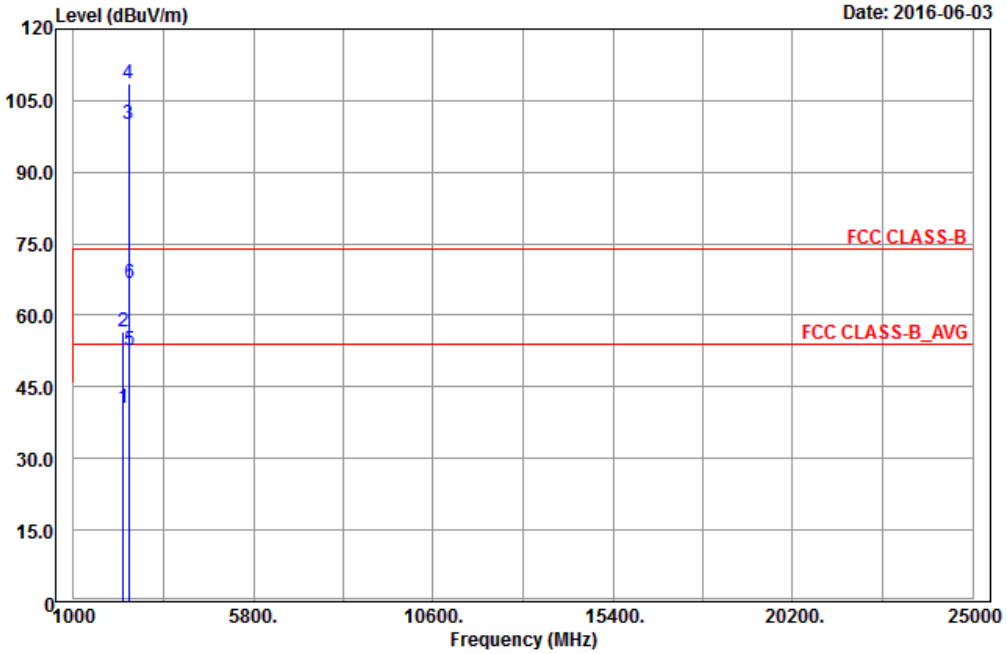
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 11	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2370	40.62	38.96	54	-13.38	31.78	5.37	35.49	267	241	Average
2370	56.42	54.76	74	-17.58	31.78	5.37	35.49	267	241	Peak
2462	98.85	96.92			31.87	5.5	35.44	267	241	Average
2462	107.06	105.13			31.87	5.5	35.44	267	241	Peak
2484	48.79	46.83	54	-5.21	31.88	5.5	35.42	267	241	Average
2484	64.25	62.29	74	-9.75	31.88	5.5	35.42	267	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2330	40.68	39.14	54	-13.32	31.73	5.33	35.52	294	343	Average
2330	56.59	55.05	74	-17.41	31.73	5.33	35.52	294	343	Peak
2462	99.95	98.02			31.87	5.5	35.44	294	343	Average
2462	108.58	106.65			31.87	5.5	35.44	294	343	Peak
2484	52.74	50.78	54	-1.26	31.88	5.5	35.42	230	352	Average
2484	66.83	64.87	74	-7.17	31.88	5.5	35.42	230	352	Peak

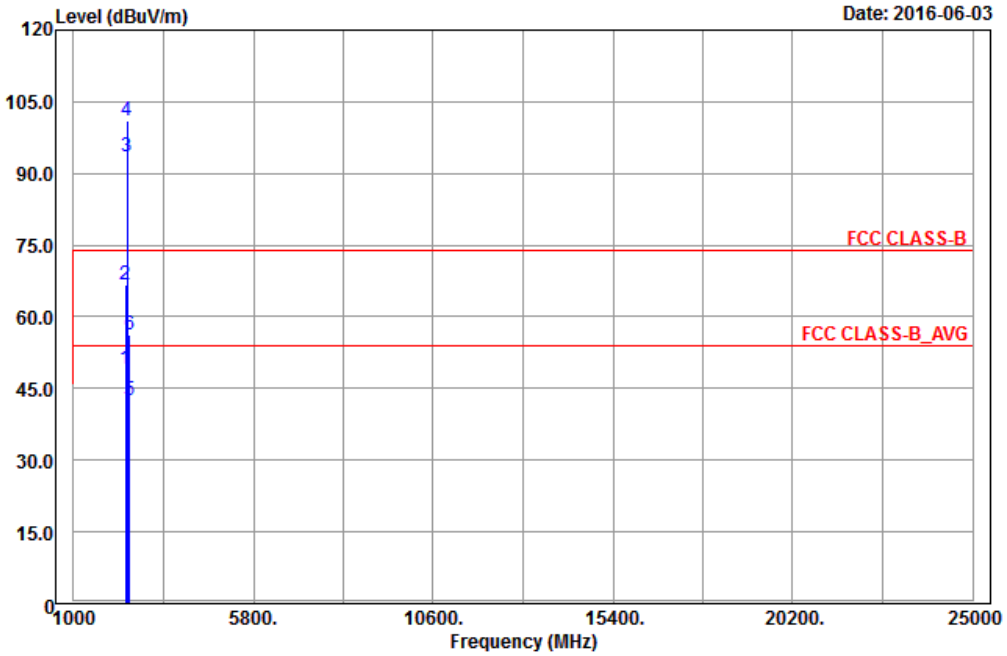
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.

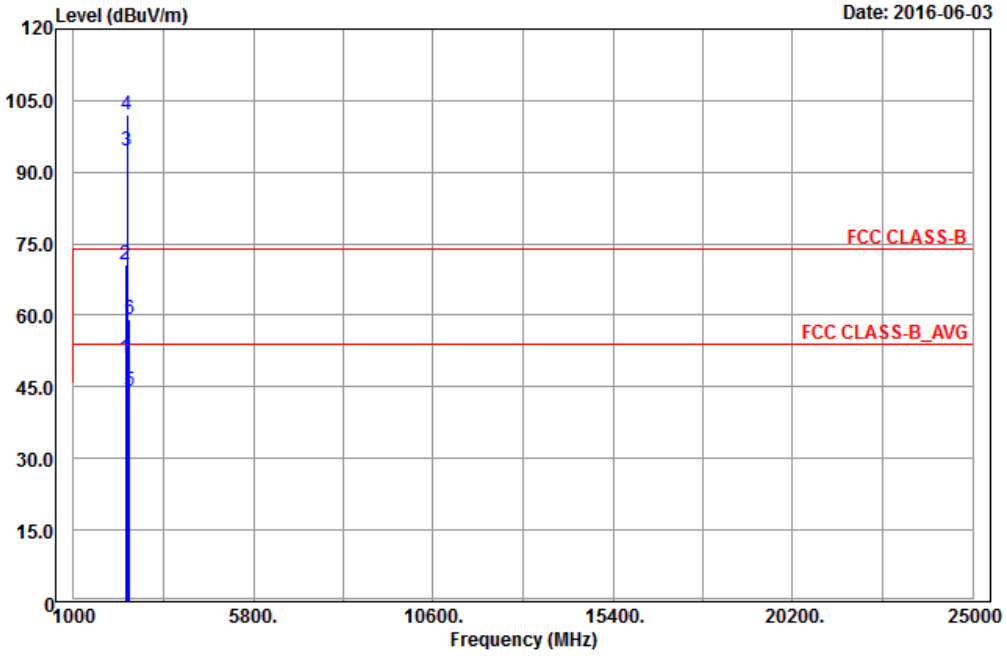
802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 3	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



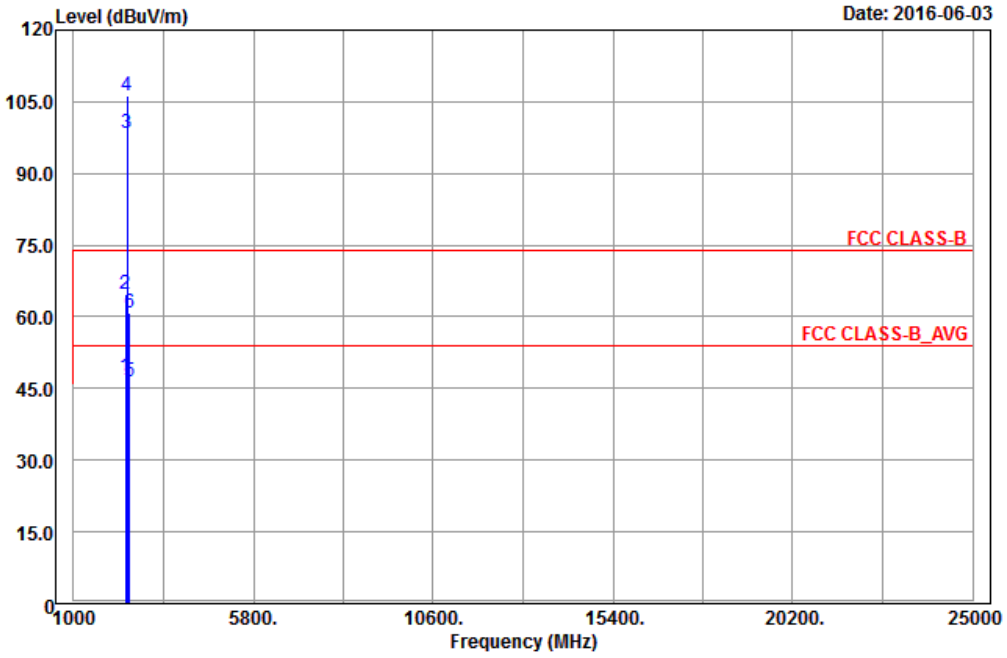
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	48.94	47.21	54	-5.06	31.8	5.4	35.47	230	241	Average
2390	66.7	64.97	74	-7.3	31.8	5.4	35.47	230	241	Peak
2422	93.37	91.57			31.83	5.43	35.46	230	241	Average
2422	101.05	99.25			31.83	5.43	35.46	230	241	Peak
2488	42.4	40.39	54	-11.6	31.9	5.53	35.42	230	241	Average
2488	56.19	54.18	74	-17.81	31.9	5.53	35.42	230	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2384	51	49.31	54	-3	31.78	5.4	35.49	250	348	Average
2384	70.51	68.82	74	-3.49	31.78	5.4	35.49	250	348	Peak
2422	94.41	92.61			31.83	5.43	35.46	271	348	Average
2422	102.11	100.31			31.83	5.43	35.46	271	348	Peak
2498	44.1	42.08	54	-9.9	31.9	5.53	35.41	271	348	Average
2498	59.32	57.3	74	-14.68	31.9	5.53	35.41	271	348	Peak

Remarks:

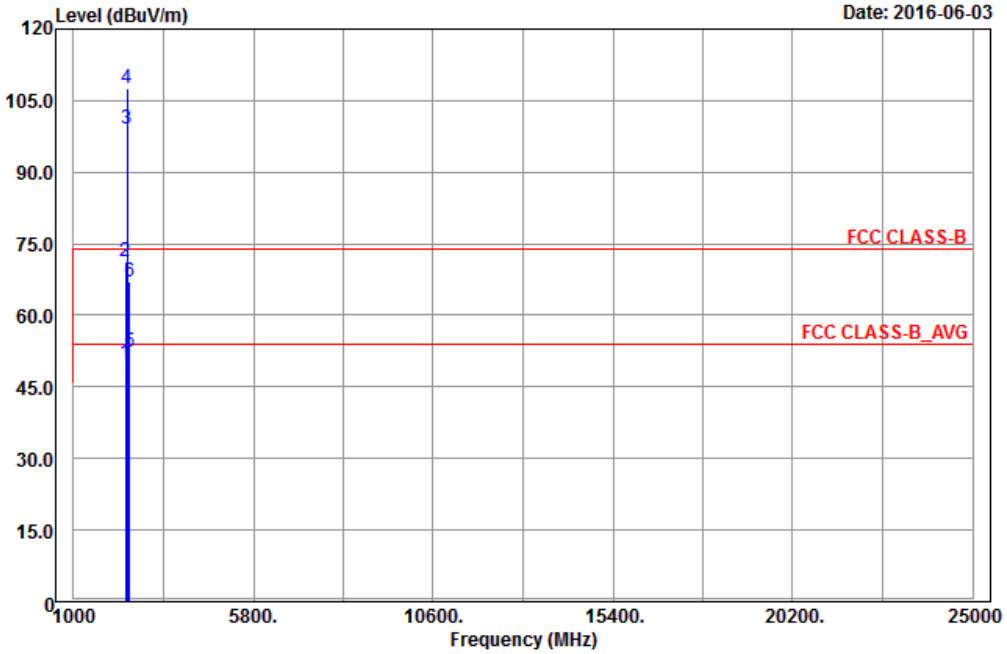
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2422 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 6	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



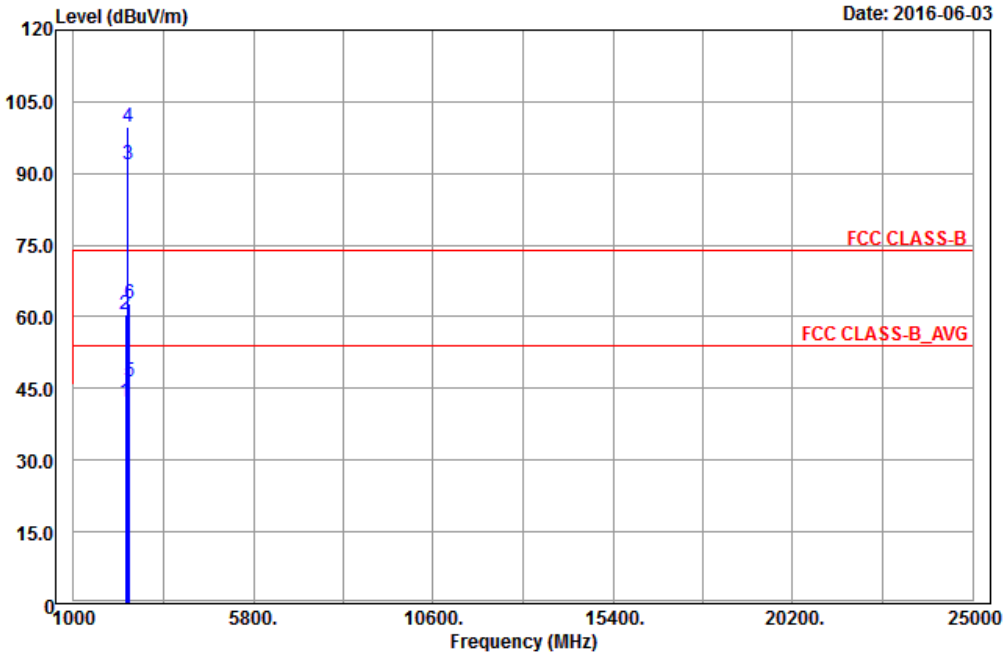
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388	47.27	45.56	54	-6.73	31.8	5.4	35.49	246	241	Average
2388	64.88	63.17	74	-9.12	31.8	5.4	35.49	246	241	Peak
2437	98.47	96.62			31.85	5.46	35.46	246	241	Average
2437	106.16	104.31			31.85	5.46	35.46	246	241	Peak
2484	46.32	44.36	54	-7.68	31.88	5.5	35.42	246	241	Average
2484	60.86	58.9	74	-13.14	31.88	5.5	35.42	246	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2386	50.03	48.32	54	-3.97	31.8	5.4	35.49	248	351	Average
2386	71.36	69.65	74	-2.64	31.8	5.4	35.49	248	351	Peak
2437	99.08	97.23			31.85	5.46	35.46	267	351	Average
2437	107.65	105.8			31.85	5.46	35.46	267	351	Peak
2484	52.21	50.25	54	-1.79	31.88	5.5	35.42	256	351	Average
2484	67.1	65.14	74	-6.9	31.88	5.5	35.42	256	351	Peak

Remarks:

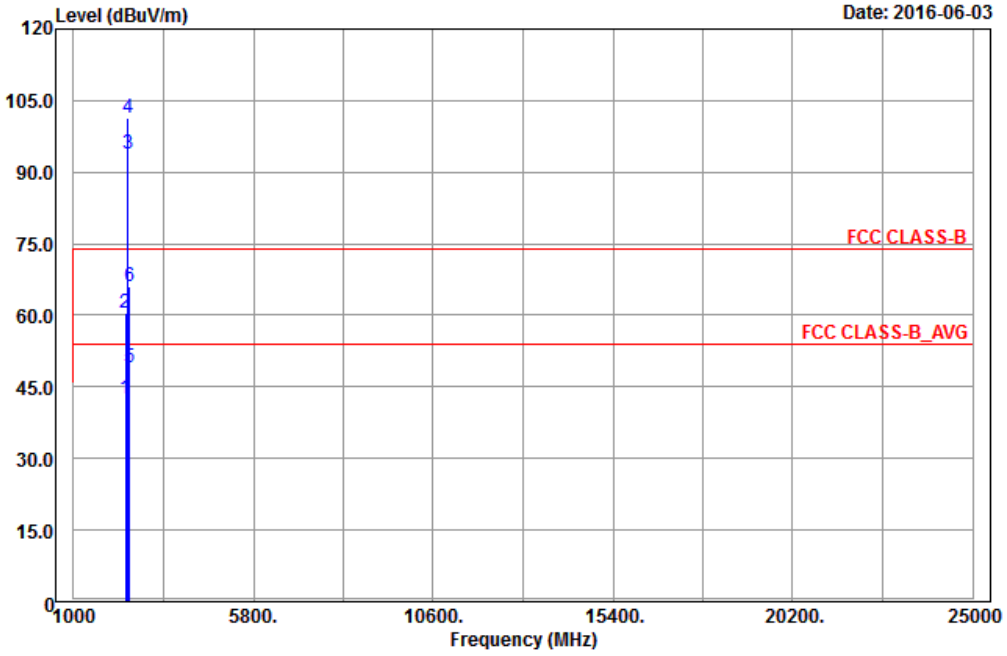
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.

EUT Test Condition		Measurement Detail	
Channel	Channel 9	**Frequency Range**	1 GHz ~ 25 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2382	42.07	40.38	54	-11.93	31.78	5.4	35.49	267	241	Average
2382	60.34	58.65	74	-13.66	31.78	5.4	35.49	267	241	Peak
2452	92	90.13			31.85	5.46	35.44	267	241	Average
2452	99.65	97.78			31.85	5.46	35.44	267	241	Peak
2484	46.27	44.31	54	-7.73	31.88	5.5	35.42	267	241	Average
2484	62.88	60.92	74	-11.12	31.88	5.5	35.42	267	241	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2386	42.45	40.74	54	-11.55	31.8	5.4	35.49	294	343	Average
2386	60.42	58.71	74	-13.58	31.8	5.4	35.49	294	343	Peak
2452	93.68	91.81			31.85	5.46	35.44	294	343	Average
2452	101.28	99.41			31.85	5.46	35.44	294	343	Peak
2484	49.02	47.06	54	-4.98	31.88	5.5	35.42	233	349	Average
2484	65.96	64	74	-8.04	31.88	5.5	35.42	233	349	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2452 MHz: Fundamental frequency.

9 kHz ~ 30 MHz DATA:

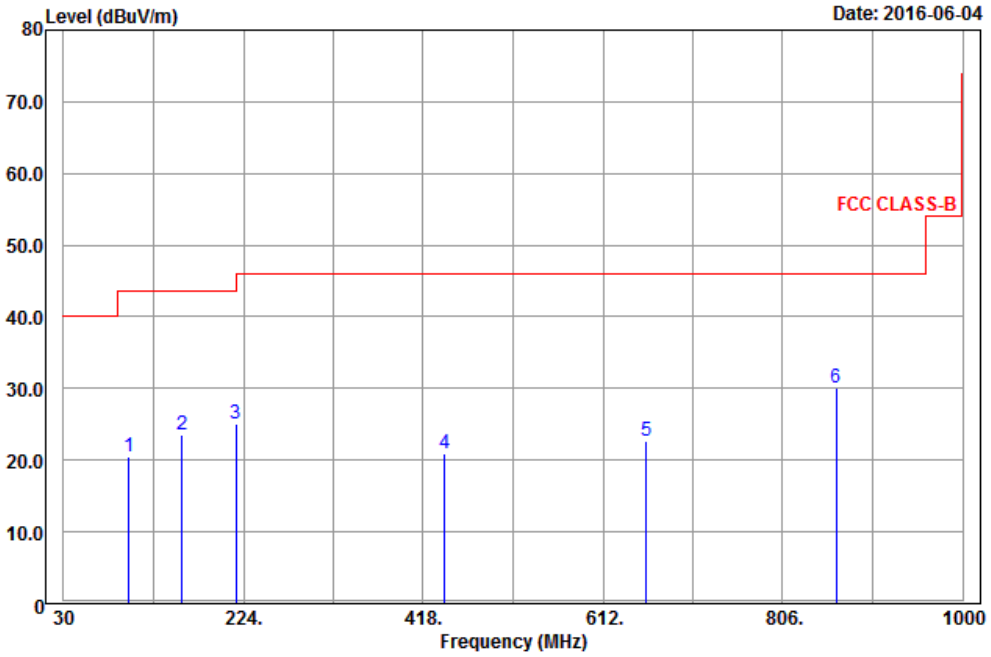
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz WORST-CASE DATA:

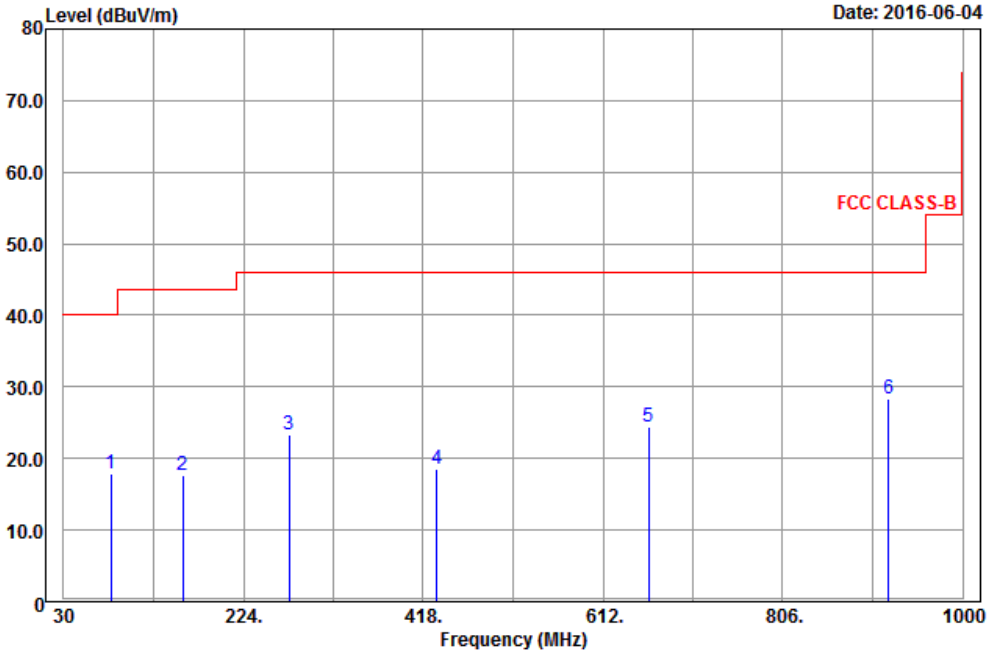
802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 1	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Horizontal



Vertical



Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
100.47	20.41	41.69	43.5	-23.09	9.7	1.28	32.26	116	127	Peak
157.98	23.51	43.58	43.5	-19.99	10.68	1.52	32.27	114	264	Peak
216.03	25.15	44.19	46	-20.85	11.54	1.65	32.23	138	176	Peak
441.4	20.98	32.76	46	-25.02	17.89	2.49	32.16	108	156	Peak
659.1	22.77	29.39	46	-23.23	22.53	2.99	32.14	196	135	Peak
863.5	30.04	33.91	46	-15.96	24.4	3.44	31.71	104	122	Peak
Antennal Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
81.3	17.81	40.39	40	-22.19	8.47	1.11	32.16	196	135	Peak
158.25	17.69	37.76	43.5	-25.81	10.68	1.52	32.27	165	128	Peak
273.54	23.25	39.76	46	-22.75	13.66	1.94	32.11	137	145	Peak
433	18.48	30.35	46	-27.52	17.81	2.49	32.17	107	142	Peak
661.2	24.39	30.78	46	-21.61	22.75	2.99	32.13	196	133	Peak
920.2	28.25	30.09	46	-17.75	25.96	3.53	31.33	105	128	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value

4.2 Conducted Output Power Measurement

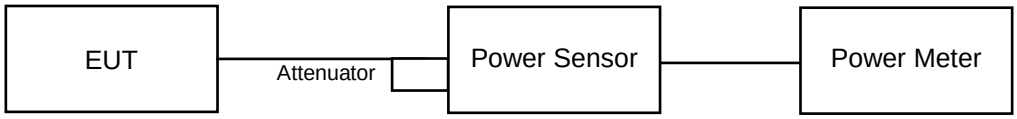
4.2.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30 dBm)
Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;
Array Gain = 5 log(NANT/NSS) dB or 3 dB, whichever is less for 20 MHz channel widths with NANT ≥ 5.

For power measurements on all other devices: Array Gain = 10 log(NANT/NSS) dB.

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedures

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.7 Test Results

802.11b

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	19.89	19.99	197.269	22.95	30	Pass
6	2437	20.01	20.05	201.388	23.04	30	Pass
11	2462	17.26	17.44	108.673	20.36	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	20.97	20.63	240.637	23.81	30	Pass
6	2437	22.01	22.13	322.160	25.08	30	Pass
11	2462	20.24	20.32	213.328	23.29	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.51	21.82	293.634	24.68	30	Pass
6	2437	22.57	22.94	377.506	25.77	30	Pass
11	2462	20.55	20.89	236.245	23.73	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	18.01	17.98	126.047	21.01	30	Pass
6	2437	23.42	23.02	420.233	26.23	30	Pass
9	2452	17.48	17.07	106.909	20.29	30	Pass

802.11b

Channel	Frequency (MHz)	AVG Power (dBm)		Total Power (dBm)
		Chain 0	Chain 1	
1	2412	17.53	17.57	20.56
6	2437	17.61	17.78	20.71
11	2462	15.51	15.61	18.57

802.11g

Channel	Frequency (MHz)	AVG Power (dBm)		Total Power (dBm)
		Chain 0	Chain 1	
1	2412	15.67	15.54	18.62
6	2437	17.34	17.56	20.46
11	2462	14.52	14.55	17.55

802.11n (HT20)

Channel	Frequency (MHz)	AVG Power (dBm)		Total Power (dBm)
		Chain 0	Chain 1	
1	2412	15.62	15.51	18.58
6	2437	17.49	17.33	20.42
11	2462	14.52	14.6	17.57

802.11n (HT40)

Channel	Frequency (MHz)	AVG Power (dBm)		Total Power (dBm)
		Chain 0	Chain 1	
3	2422	11.21	11.02	14.13
6	2437	17.11	17.01	20.07
9	2452	10.48	10.25	13.38

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab
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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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