

FCC Test Report

Report No.: RF190606C07-2

FCC ID: A4R-H2C

Test Model: H2C

Received Date: Jun. 06, 2019

Test Date: Jun. 26, 2019 ~ Jul. 24, 2019

Issued Date: Jul. 30, 2019

Applicant: Google LLC

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF190606C07-2	Original Release	Jul. 30, 2019

1 Certificate of Conformity

Product: Interactive media streaming device

Test Model: H2C

Sample Status: Production Unit

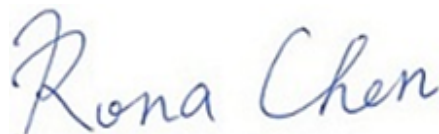
Applicant: Google LLC

Test Date: Jun. 26, 2019 ~ Jul. 24, 2019

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 RF characteristics under the conditions specified in this report.

Prepared by :

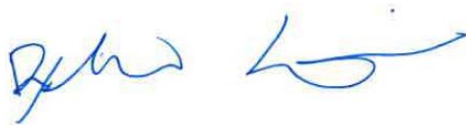


Date:

Jul. 30, 2019

Rona Chen / Specialist

Approved by :



Date:

Jul. 30, 2019

Dylan Chiou / Project Engineer

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	Pass	Meet the requirement of limit. Minimum passing margin is -14.91 dB at 0.59943 MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.62 dB at 2389.24 MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Reference only
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.94 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Interactive media streaming device
Test Model	H2C
Status of EUT	Production Unit
Power Supply Rating	14 Vdc (Adapter)
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 150.0 Mbps
Operating Frequency	2412 ~ 2462 MHz
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	70.958 mW
Antenna Type	Refer to Note as below
Antenna Connector	Refer to Note as below
Accessory Device	Refer to Note as below
Data Cable Supplied	N/A
HW Version	EVT
SW Version	SD8987-16.100.10.P10-C4X15C636a-GPL-<FP100>
SN	9514105APZZ2CR (For APCM Test) 9514105APZZ2CI (For RE / PLC Test)

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	Tx Function
802.11b	1TX (SISO)
802.11g	1TX (SISO)
802.11n (HT20)	1TX (SISO)
802.11n (HT40)	1TX (SISO)

2. The EUT's accessories list refers to EUT Photo.pdf.

3. The following antennas were provided to the EUT.

Ant. No.	Model	Type	Connector	Antenna Gain (dBi)				
				2.4~2.4835 GHz	5.15~5.25 GHz	5.25~5.35 GHz	5.47~5.725 GHz	5.725~5.85 GHz
1	N/A	PIFA	N/A	0.79	4.06	3.10	5.15	5.23
2	N/A	PIFA	N/A	1.39	3.00	2.69	5.35	5.29

4. The above EUT information is declared by manufacturer and for more detailed features description, please refers 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 $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE $\geq$ 1G**: Radiated Emission above 1 GHz

RE<1G: Radiated Emission below 1 GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
2. "-" 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, 2, 6, 10, 11	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

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 (HT40)	3 to 9	3	OFDM	BPSK	13.5

Power Line Conducted Emission Test:

- ☒ 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 (HT40)	3 to 9	3	OFDM	BPSK	13.5

Bandedge Measurement:

- ☒ 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, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 11	1, 11	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 9	3, 9	OFDM	BPSK	13.5

Antenna Port Conducted Measurement:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ 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	6.5
-	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Thomas Wei
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Thomas Wei
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Thomas Wei
APCM	25 deg. C, 65 % RH	14 Vdc	Alan Wu

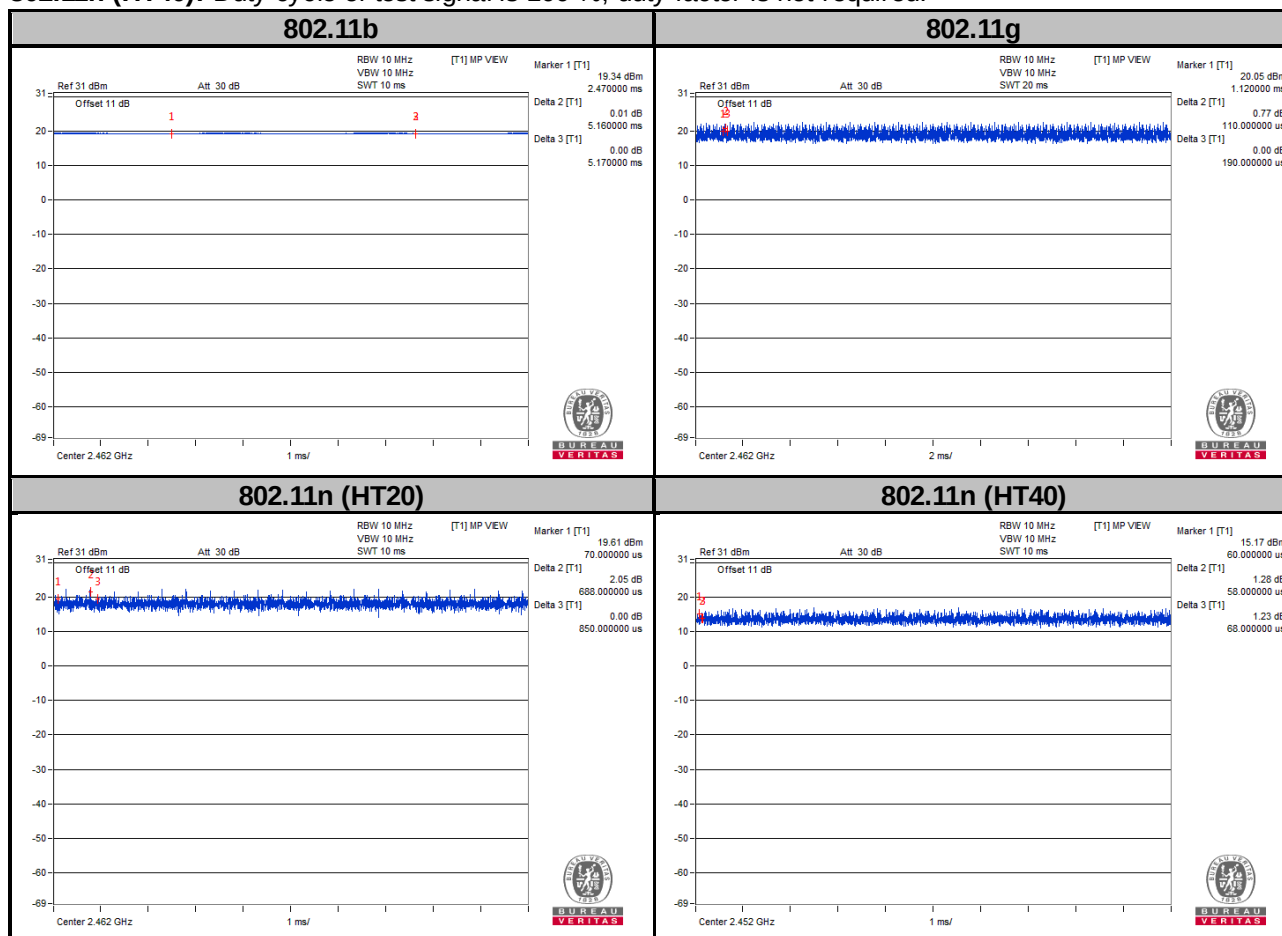
3.3 Duty Cycle of Test Signal

802.11b: Duty cycle of test signal is 100 %, duty factor is not required.

802.11g: Duty cycle of test signal is 100 %, duty factor is not required.

802.11n (HT20): Duty cycle of test signal is 100 %, duty factor is not required.

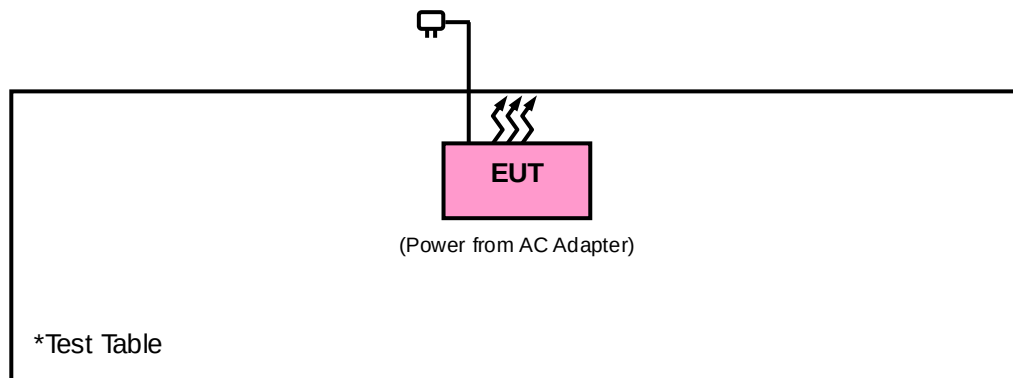
802.11n (HT40): Duty cycle of test signal is 100 %, duty factor is not required.



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.4.1 Configuration of System under Test



3.5 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)

KDB 558074 D01 15.247 Meas Guidance v05r02

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 30 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	N9038A	MY51210203	Mar. 18, 2019	Mar. 17, 2020
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 13, 2018	Dec. 12, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	148	Nov. 25, 2018	Nov. 24, 2019
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 23, 2018	Nov. 22, 2019
Fixed Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
Loop Antenna	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
Preamplifier EMCI	EMC001340	980201	Oct. 12, 2018	Oct. 11, 2019
Preamplifier EMCI	EMC 012645	980115	Oct. 12, 2018	Oct. 11, 2019
Preamplifier EMCI	EMC 184045	980116	Oct. 12, 2018	Oct. 11, 2019
Preamplifier EMCI	EMC 330H	980112	Oct. 12, 2018	Oct. 11, 2019
Power Meter Anritsu	ML2495A	1012010	Sep. 05, 2018	Sep. 04, 2019
Power Sensor Anritsu	MA2411B	1315050	Sep. 04, 2018	Sep. 03, 2019
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-8 000&3000	140811+170717	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1 000(140807)	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 12, 2018	Oct. 11, 2019
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	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 HwaYa Chamber 10.

3. The horn antenna and preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1 GHz if tested.

4.1.3 Test Procedures

For Radiated Emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.

For Radiated Emission above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 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:

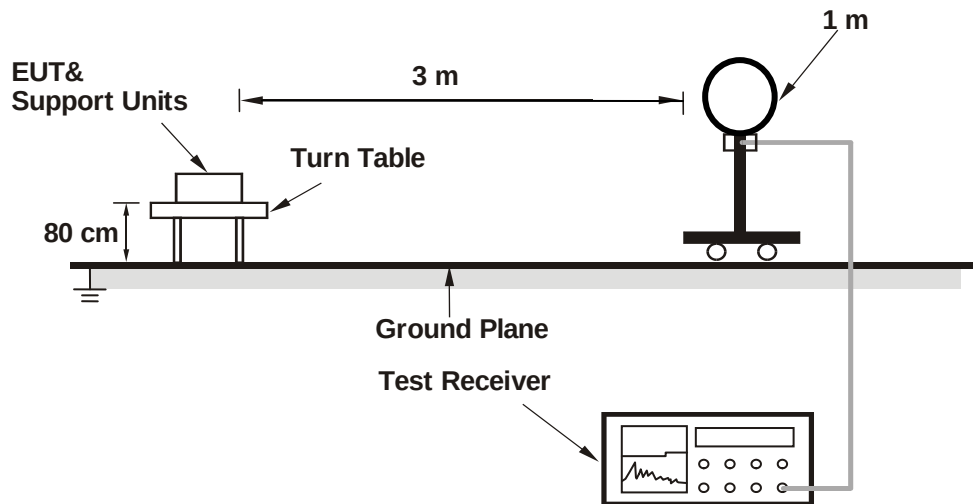
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
(11b: RBW = 1 MHz, VBW = 10 Hz ; 11g: RBW = 1 MHz, VBW = 10 Hz ;
11n (HT20): RBW = 1 MHz, VBW = 10 Hz ; 11n (HT40): RBW = 1 MHz, VBW = 10 Hz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

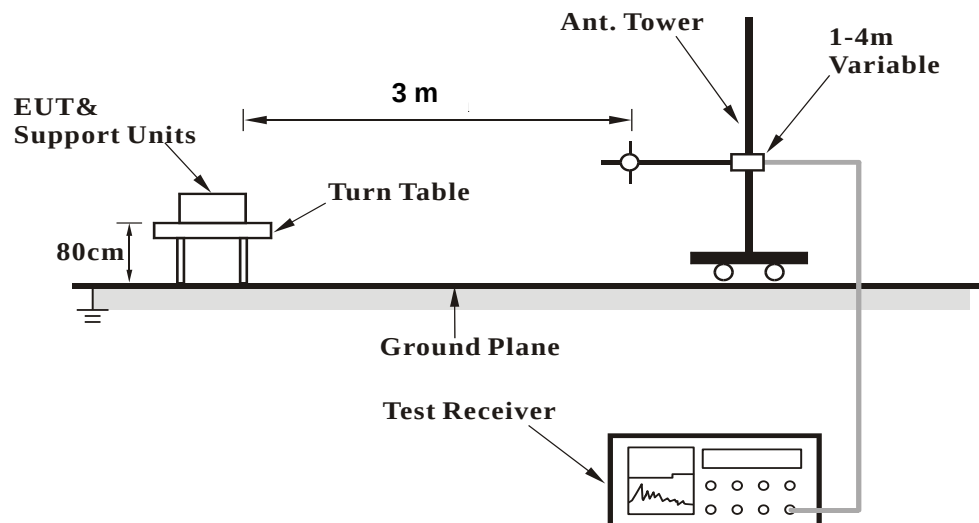
No deviation.

4.1.5 Test Set Up

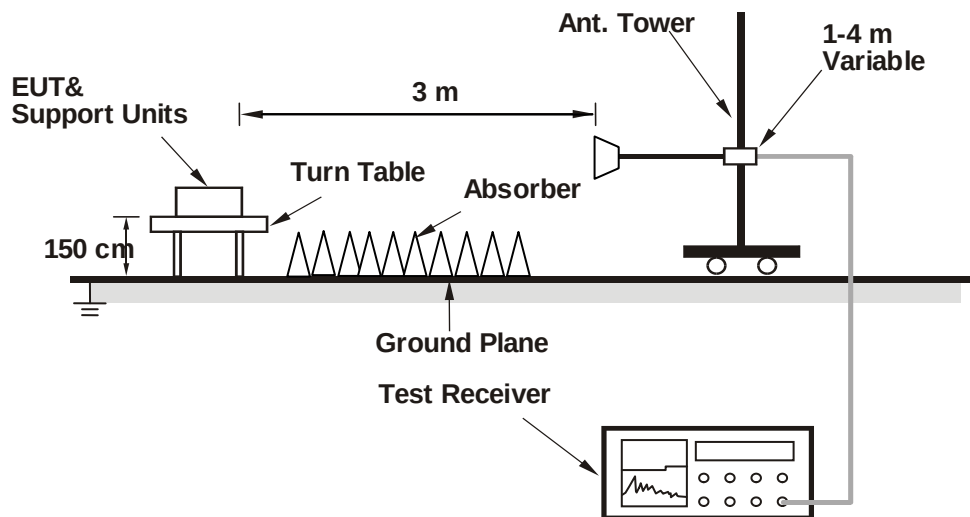
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.6 EUT Operating Conditions

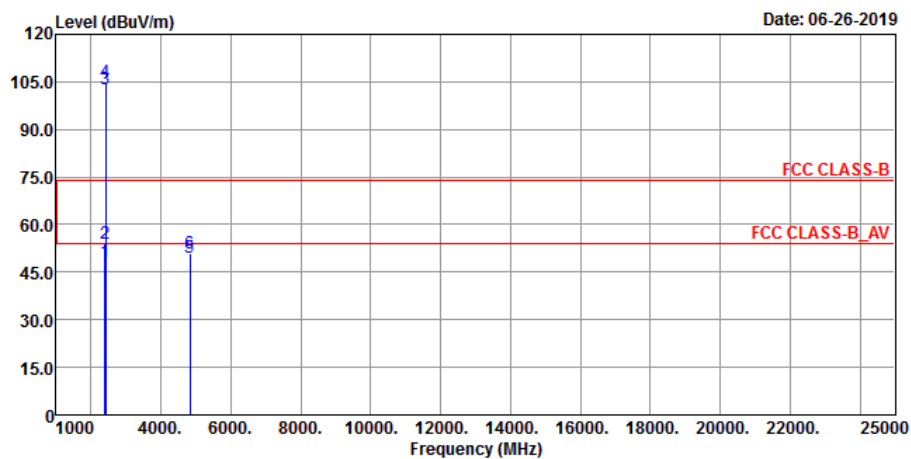
- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

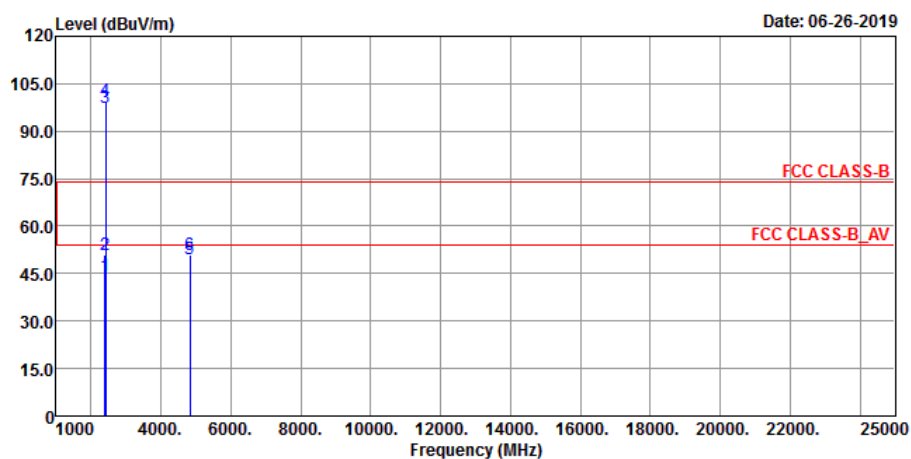
Above 1 GHz Data :
802.11b

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	Thomas Wei

Horizontal



Vertical



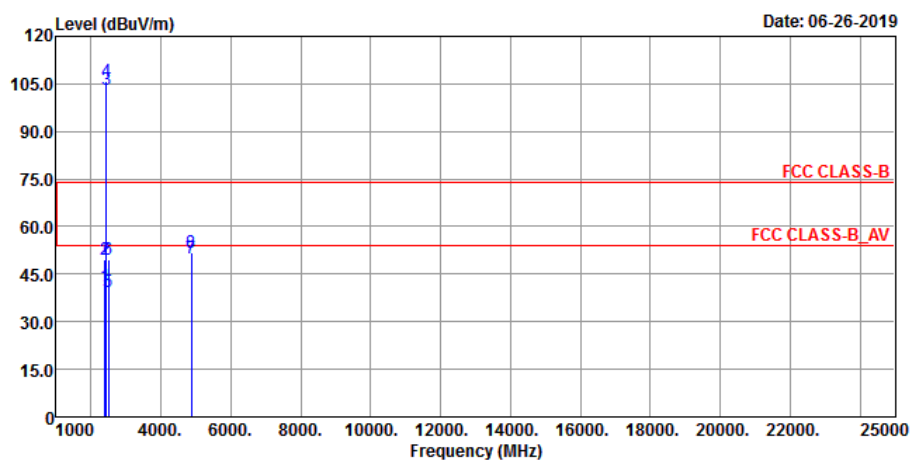
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2386.16	48.13	53.11	-4.98	54	-5.87	123	59	Average
2386.16	53.87	58.85	-4.98	74	-20.13	123	59	Peak
2412	102.54	107.55	-5.01			123	59	Average
2412	105.01	110.02	-5.01			123	59	Peak
4824	49.63	64.01	-14.38	54	-4.37	100	260	Average
4824	50.79	65.17	-14.38	74	-23.21	100	260	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2386.16	44.35	49.33	-4.98	54	-9.65	116	117	Average
2386.16	51.06	56.04	-4.98	74	-22.94	116	117	Peak
2412	97.26	102.27	-5.01			116	117	Average
2412	99.74	104.75	-5.01			116	117	Peak
4824	49.39	63.77	-14.38	54	-4.61	114	95	Average
4824	50.82	65.2	-14.38	74	-23.18	114	95	Peak

Remarks:

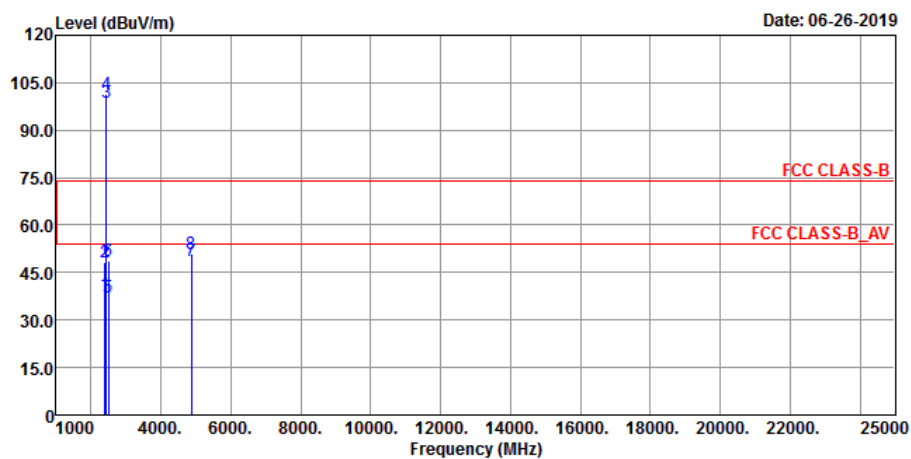
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.1	41.24	46.22	-4.98	54	-12.76	123	57	Average
2389.1	49.78	54.76	-4.98	74	-24.22	123	57	Peak
2437	103.23	108.21	-4.98			123	57	Average
2437	105.73	110.71	-4.98			123	57	Peak
2484.8	39.42	44.27	-4.85	54	-14.58	123	57	Average
2484.8	49.47	54.32	-4.85	74	-24.53	123	57	Peak
4874	49.91	63.99	-14.08	54	-4.09	106	260	Average
4874	51.88	65.96	-14.08	74	-22.12	106	260	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

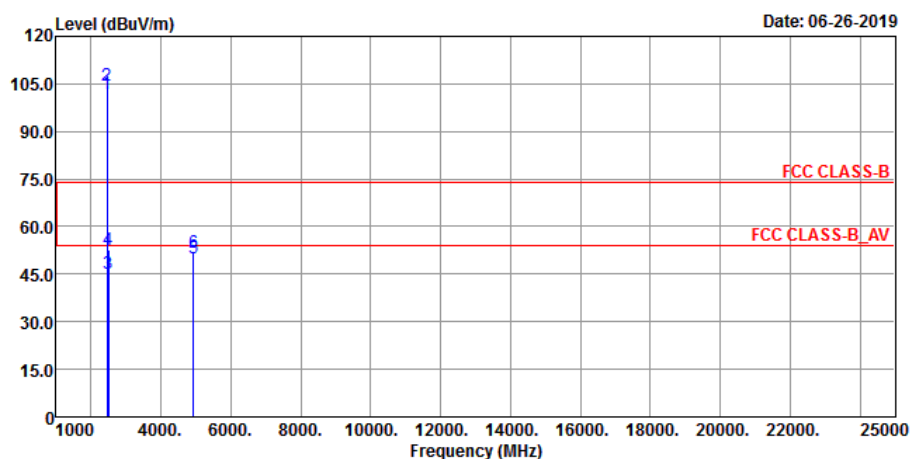
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.24	38.15	43.13	-4.98	54	-15.85	125	119	Average
2389.24	48.14	53.12	-4.98	74	-25.86	125	119	Peak
2437	98.83	103.81	-4.98			125	119	Average
2437	101.4	106.38	-4.98			125	119	Peak
2484.8	37.37	42.22	-4.85	54	-16.63	125	119	Average
2484.8	48.91	53.76	-4.85	74	-25.09	125	119	Peak
4874	48.81	62.89	-14.08	54	-5.19	119	93	Average
4874	50.78	64.86	-14.08	74	-23.22	119	93	Peak

Remarks:

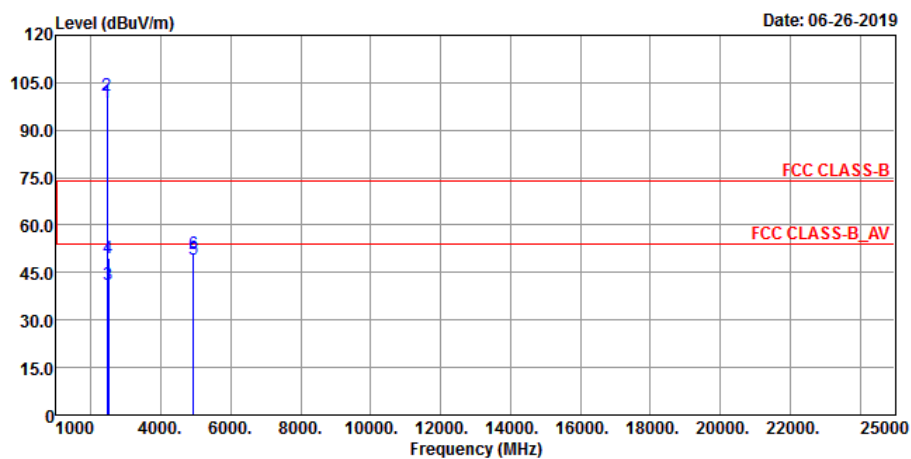
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	102.01	106.92	-4.91			160	50	Average
2462	104.43	109.34	-4.91			160	50	Peak
2487.92	45.3	50.15	-4.85	54	-8.7	160	50	Average
2487.92	52.81	57.66	-4.85	74	-21.19	160	50	Peak
4924	49.94	63.9	-13.96	54	-4.06	100	259	Average
4924	51.94	65.9	-13.96	74	-22.06	100	259	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	98.64	103.55	-4.91			147	123	Average
2462	101.17	106.08	-4.91			147	123	Peak
2487.84	41.37	46.22	-4.85	54	-12.63	147	123	Average
2487.84	49.52	54.37	-4.85	74	-24.48	147	123	Peak
4924	49.14	63.1	-13.96	54	-4.86	110	93	Average
4924	50.98	64.94	-13.96	74	-23.02	110	93	Peak

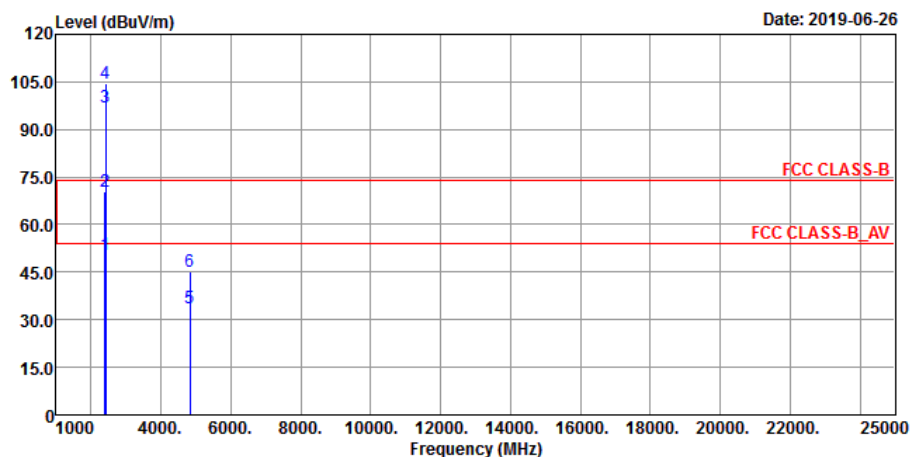
Remarks:

1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

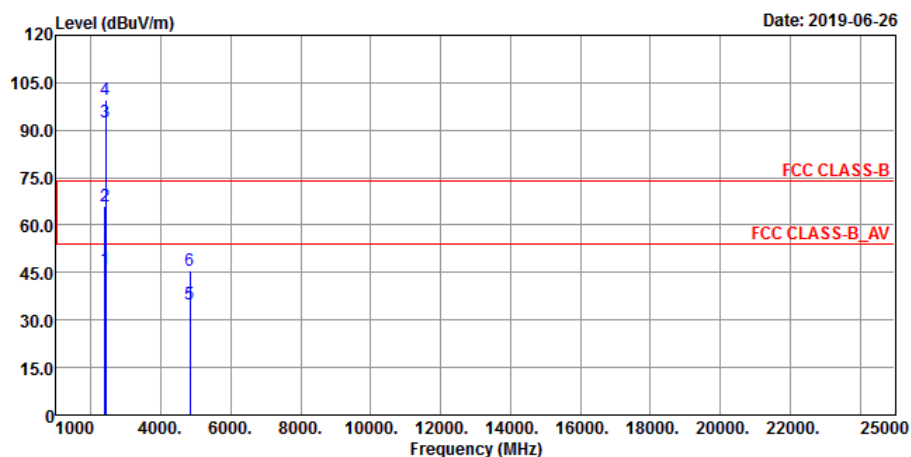
802.11g

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	Thomas Wei

Horizontal



Vertical



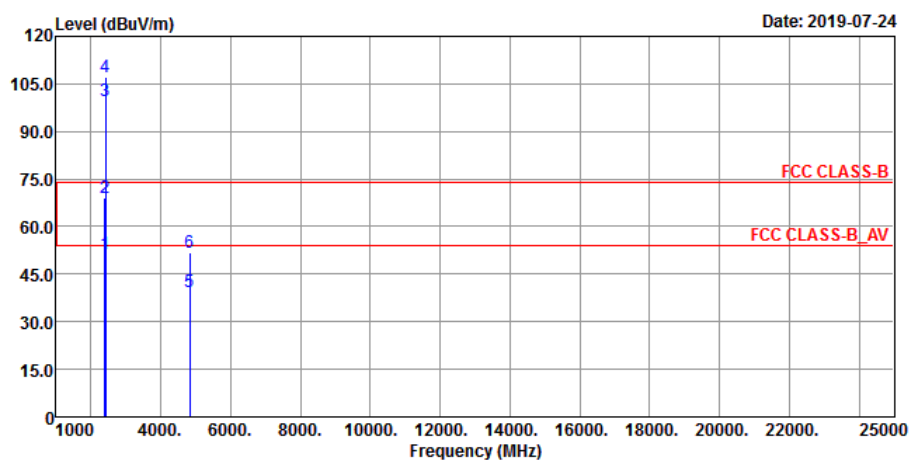
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.66	50.34	55.32	-4.98	54	-3.66	130	195	Average
2389.66	70.43	75.41	-4.98	74	-3.57	130	195	Peak
2412	97.06	102.07	-5.01			130	195	Average
2412	104.57	109.58	-5.01			130	195	Peak
4824	33.76	48.14	-14.38	54	-20.24	167	104	Average
4824	44.98	59.36	-14.38	74	-29.02	167	104	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.66	45.85	50.83	-4.98	54	-8.15	157	148	Average
2389.66	65.8	70.78	-4.98	74	-8.2	157	148	Peak
2412	92.69	97.7	-5.01			157	148	Average
2412	99.52	104.53	-5.01			157	148	Peak
4824	34.84	49.22	-14.38	54	-19.16	120	153	Average
4824	45.73	60.11	-14.38	74	-28.27	120	153	Peak

Remarks:

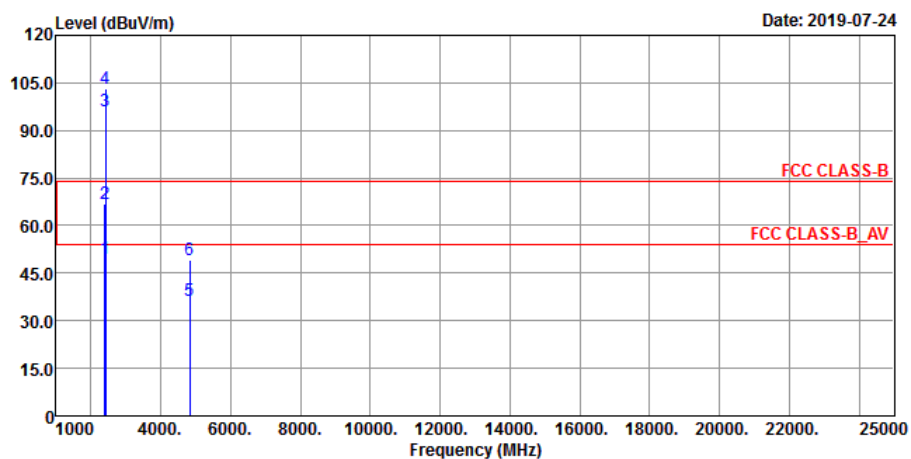
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 2	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	Thomas Wei

Horizontal



Vertical



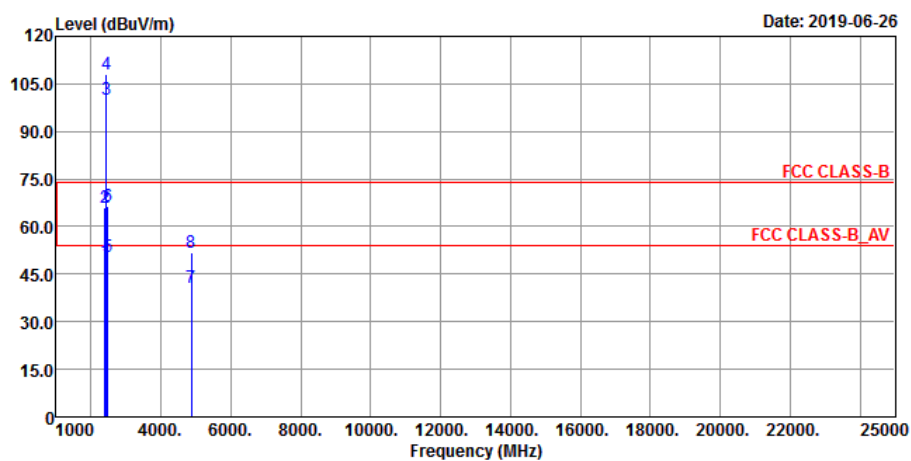
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	51.47	56.47	-5	54	-2.53	353	62	Average
2390	68.97	73.97	-5	74	-5.03	353	62	Peak
2417	99.72	104.67	-4.95			353	62	Average
2417	107.22	112.17	-4.95			353	62	Peak
4834	39.28	53.56	-14.28	54	-14.72	100	246	Average
4834	51.85	66.13	-14.28	74	-22.15	100	246	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	49.78	54.78	-5	54	-4.22	110	121	Average
2390	66.69	71.69	-5	74	-7.31	110	121	Peak
2417	95.93	100.88	-4.95			110	121	Average
2417	103.03	107.98	-4.95			110	121	Peak
4834	36.45	50.73	-14.28	54	-17.55	176	303	Average
4834	49	63.28	-14.28	74	-25	176	303	Peak

Remarks:

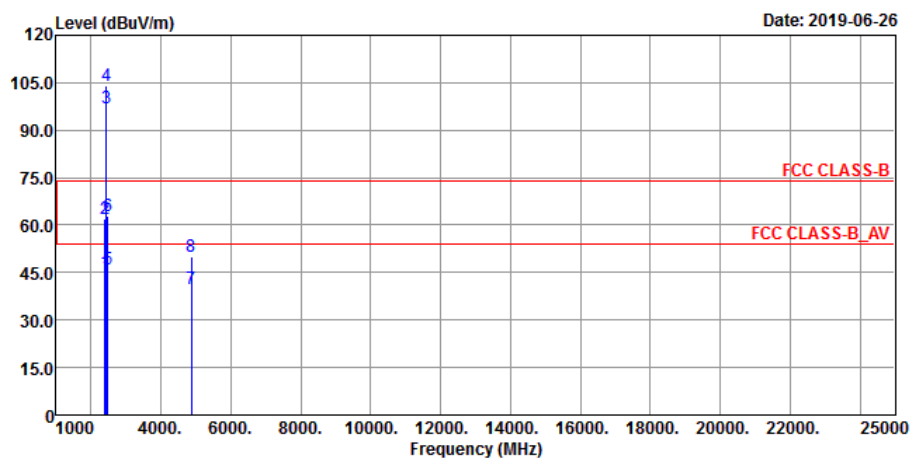
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2417 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	49.06	54.06	-5	54	-4.94	122	66	Average
2390	65.92	70.92	-5	74	-8.08	122	66	Peak
2437	100.26	105.24	-4.98			122	66	Average
2437	108.21	113.19	-4.98			122	66	Peak
2483.5	50.49	55.34	-4.85	54	-3.51	122	66	Average
2483.5	66.35	71.2	-4.85	74	-7.65	122	66	Peak
4874	40.95	55.03	-14.08	54	-13.05	152	133	Average
4874	51.64	65.72	-14.08	74	-22.36	152	133	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

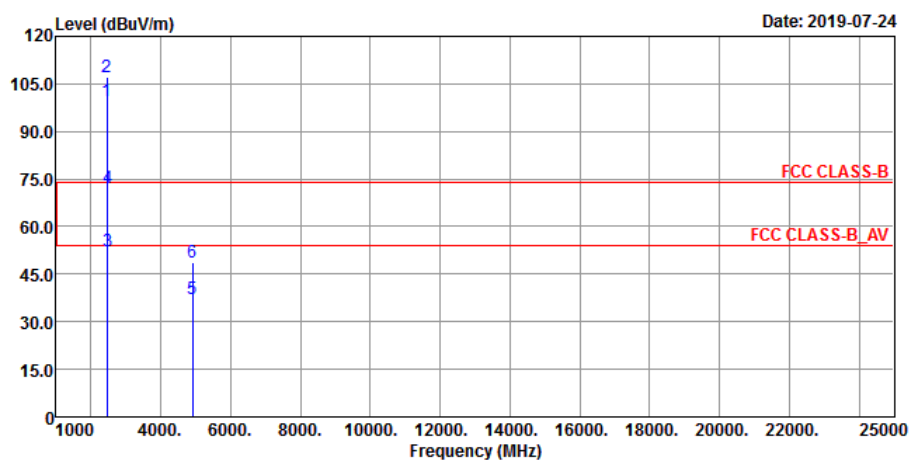
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2390	45.07	50.07	-5	54	-8.93	110	118	Average
2390	61.98	66.98	-5	74	-12.02	110	118	Peak
2437	96.79	101.77	-4.98			110	118	Average
2437	103.93	108.91	-4.98			110	118	Peak
2483.5	45.91	50.76	-4.85	54	-8.09	110	118	Average
2483.5	62.84	67.69	-4.85	74	-11.16	110	118	Peak
4874	39.82	53.9	-14.08	54	-14.18	103	111	Average
4874	50.14	64.22	-14.08	74	-23.86	103	111	Peak

Remarks:

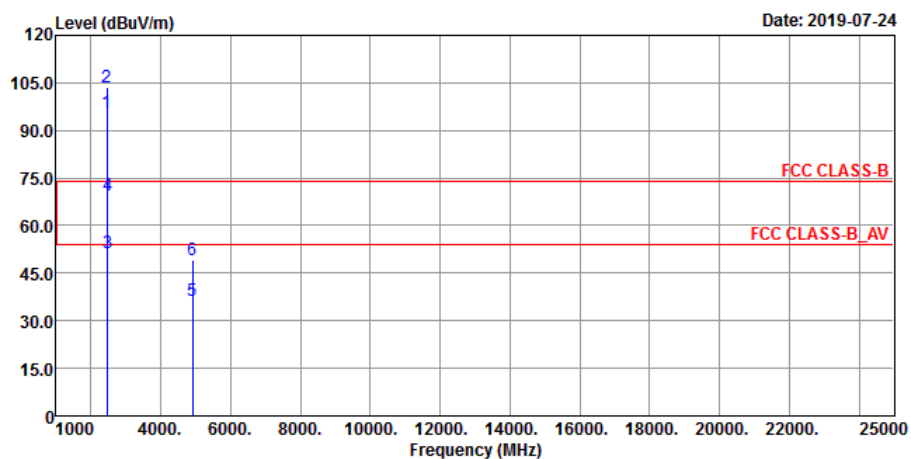
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 10	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	Thomas Wei

Horizontal



Vertical



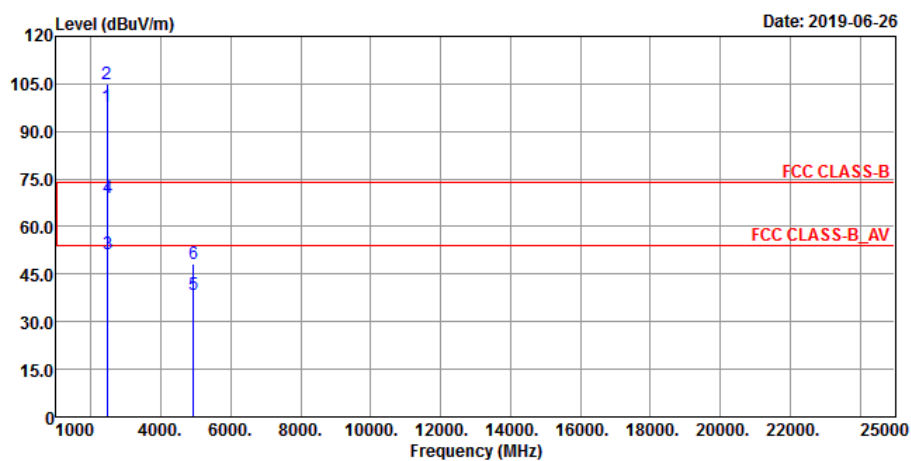
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	99.54	104.45	-4.91			344	61	Average
2457	107.13	112.04	-4.91			344	61	Peak
2483.5	52.14	56.99	-4.85	54	-1.86	344	61	Average
2483.5	72.03	76.88	-4.85	74	-1.97	344	61	Peak
4914	37.35	51.33	-13.98	54	-16.65	203	198	Average
4914	48.78	62.76	-13.98	74	-25.22	203	198	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	95.76	100.67	-4.91			125	123	Average
2457	103.41	108.32	-4.91			125	123	Peak
2483.5	51.58	56.43	-4.85	54	-2.42	125	123	Average
2483.5	69.68	74.53	-4.85	74	-4.32	125	123	Peak
4914	36.4	50.38	-13.98	54	-17.6	133	204	Average
4914	49.32	63.3	-13.98	74	-24.68	133	204	Peak

Remarks:

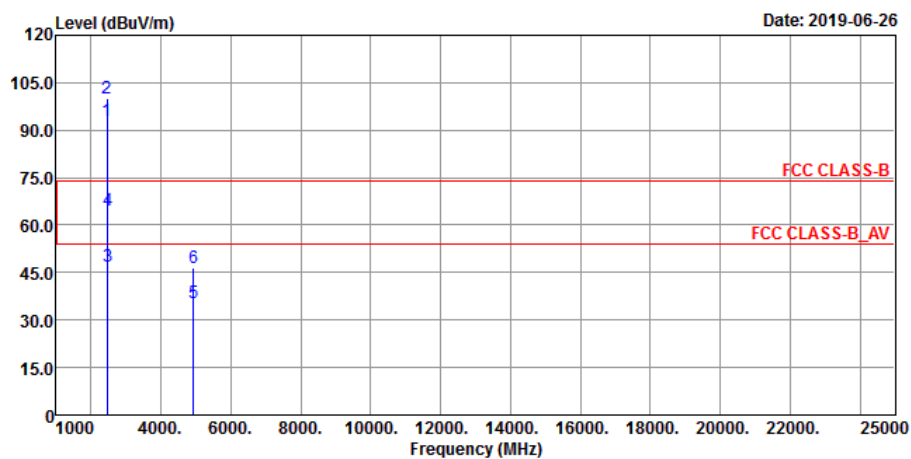
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2457 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	97.64	102.55	-4.91			121	54	Average
2462	104.86	109.77	-4.91			121	54	Peak
2483.5	51.38	56.23	-4.85	54	-2.62	121	54	Average
2483.5	69.09	73.94	-4.85	74	-4.91	121	54	Peak
4924	38.56	52.52	-13.96	54	-15.44	100	244	Average
4924	48.33	62.29	-13.96	74	-25.67	100	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	92.81	97.72	-4.91			124	141	Average
2462	99.96	104.87	-4.91			124	141	Peak
2483.5	47.15	52	-4.85	54	-6.85	124	141	Average
2483.5	64.64	69.49	-4.85	74	-9.36	124	141	Peak
4924	35.36	49.32	-13.96	54	-18.64	100	6	Average
4924	46.28	60.24	-13.96	74	-27.72	100	6	Peak

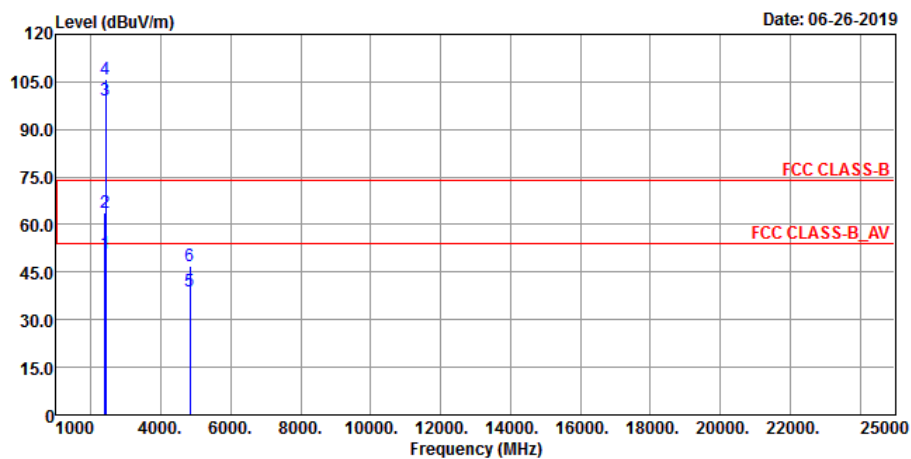
Remarks:

1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

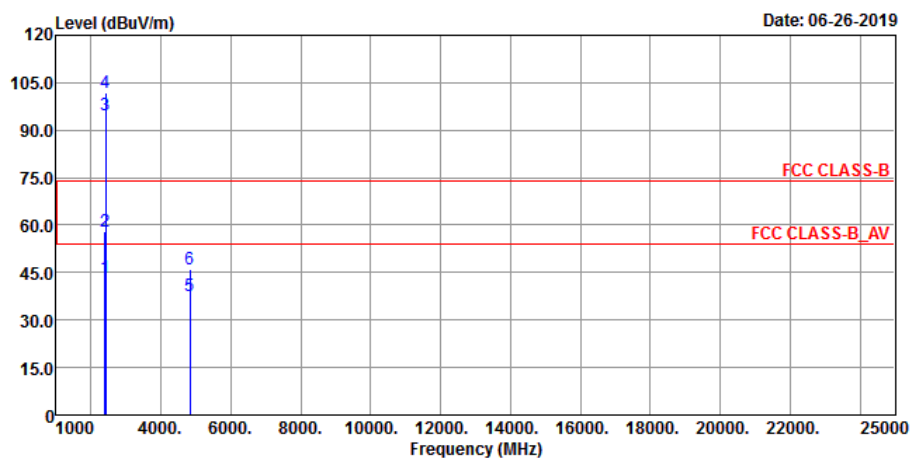
802.11n (HT20)

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	Thomas Wei

Horizontal



Vertical



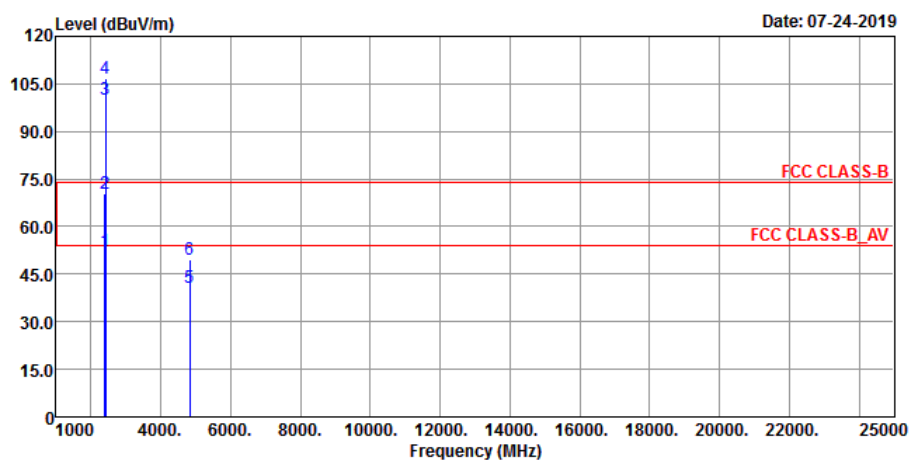
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	50.77	55.77	-5	54	-3.23	104	198	Average
2389.8	63.7	68.7	-5	74	-10.3	104	198	Peak
2412	99.28	66.77	32.51			104	198	Average
2412	106.01	73.5	32.51			104	198	Peak
4824	39.08	53.46	-14.38	54	-14.92	100	244	Average
4824	47.04	61.42	-14.38	74	-26.96	100	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	43.38	48.38	-5	54	-10.62	112	138	Average
2389.94	57.99	62.99	-5	74	-16.01	112	138	Peak
2412	94.78	62.27	32.51			112	138	Average
2412	101.63	69.12	32.51			112	138	Peak
4824	37.85	52.23	-14.38	54	-16.15	129	82	Average
4824	46.22	60.6	-14.38	74	-27.78	129	82	Peak

Remarks:

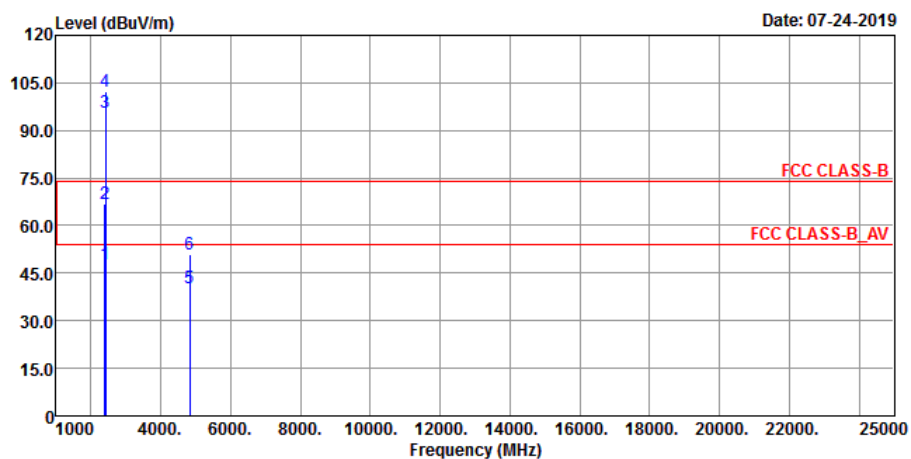
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 2	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	Thomas Wei

Horizontal



Vertical



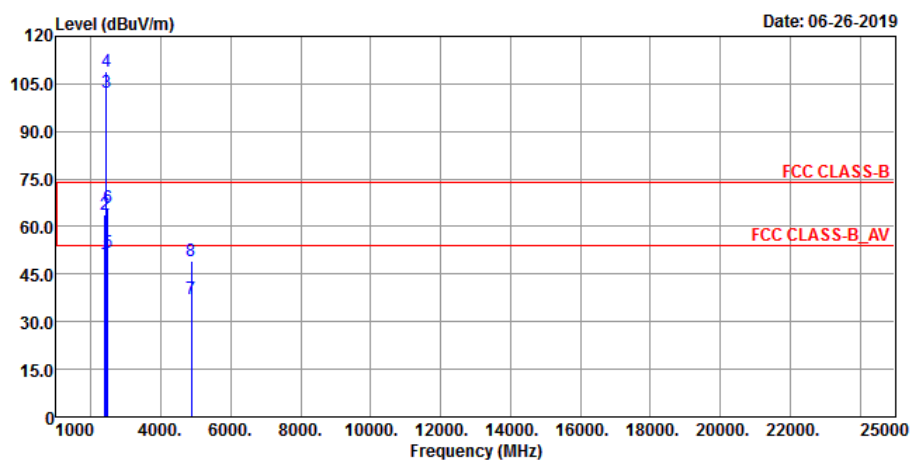
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	52.15	57.15	-5	54	-1.85	111	201	Average
2389.8	70.61	75.61	-5	74	-3.39	111	201	Peak
2417	99.93	104.88	-4.95			111	201	Average
2417	106.67	111.62	-4.95			111	201	Peak
4834	40.72	55	-14.28	54	-13.28	100	254	Average
4834	49.58	63.86	-14.28	74	-24.42	100	254	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	47.94	52.94	-5	54	-6.06	121	137	Average
2389.94	66.83	71.83	-5	74	-7.17	121	137	Peak
2417	95.68	100.63	-4.95			121	137	Average
2417	102.49	107.44	-4.95			121	137	Peak
4834	40.32	54.6	-14.28	54	-13.68	113	106	Average
4834	50.82	65.1	-14.28	74	-23.18	113	106	Peak

Remarks:

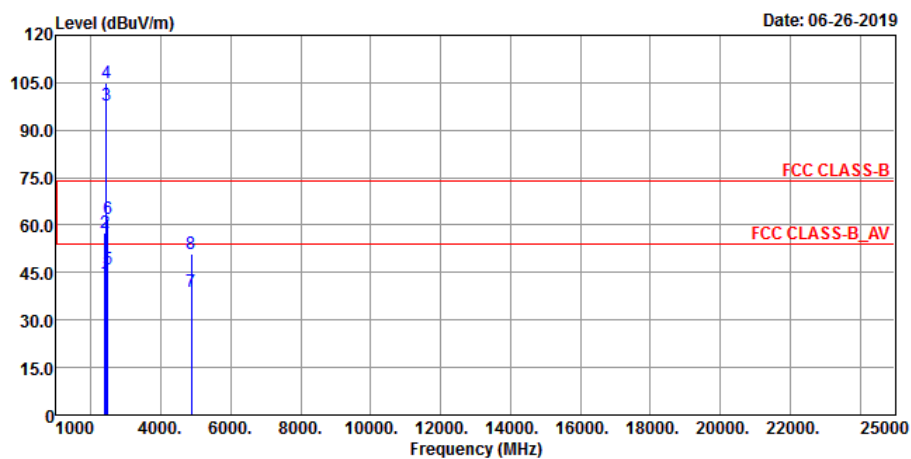
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2417 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.24	48.74	53.72	-4.98	54	-5.26	100	198	Average
2389.24	63.78	68.76	-4.98	74	-10.22	100	198	Peak
2437	102.21	69.73	32.48			100	198	Average
2437	108.86	76.38	32.48			100	198	Peak
2483.68	51.9	56.75	-4.85	54	-2.1	100	198	Average
2483.68	65.98	70.83	-4.85	74	-8.02	100	198	Peak
4874	37.41	51.49	-14.08	54	-16.59	121	224	Average
4874	49.19	63.27	-14.08	74	-24.81	121	224	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

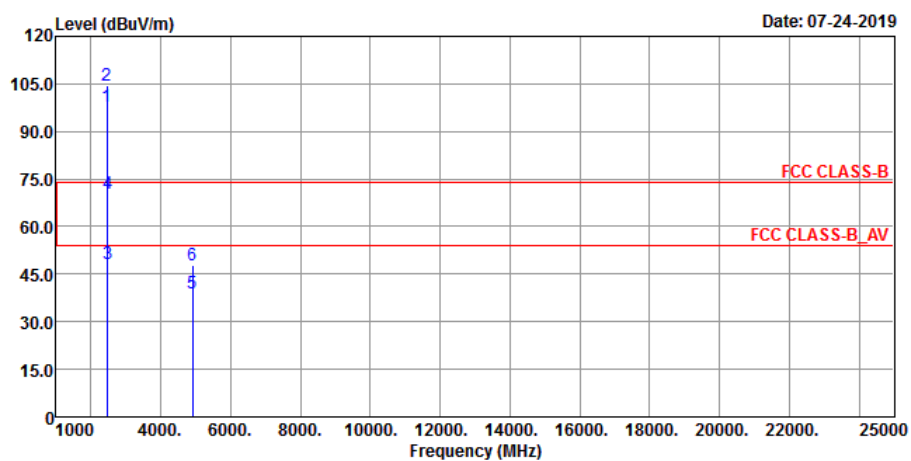
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.38	42.19	47.17	-4.98	54	-11.81	108	137	Average
2389.38	57.41	62.39	-4.98	74	-16.59	108	137	Peak
2437	97.81	65.33	32.48			108	137	Average
2437	104.86	72.38	32.48			108	137	Peak
2483.52	45.83	50.68	-4.85	54	-8.17	108	137	Average
2483.52	62.13	66.98	-4.85	74	-11.87	108	137	Peak
4874	38.76	52.84	-14.08	54	-15.24	127	82	Average
4874	50.97	65.05	-14.08	74	-23.03	127	82	Peak

Remarks:

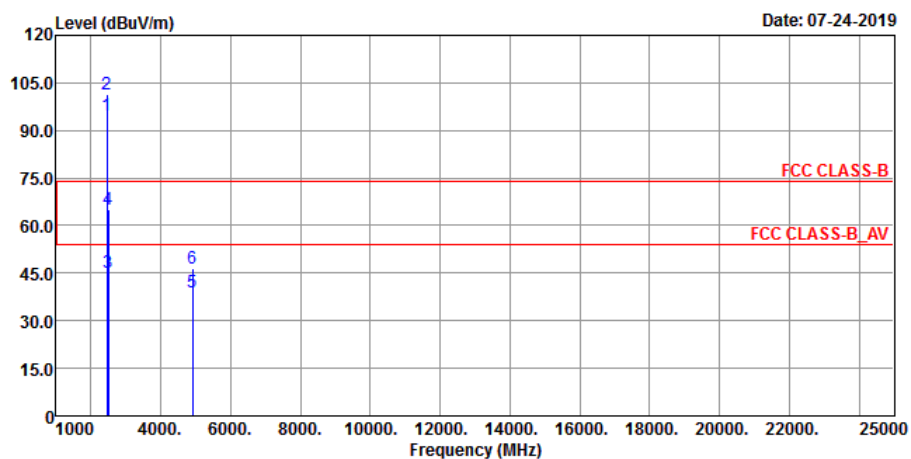
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 10	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	Thomas Wei

Horizontal



Vertical



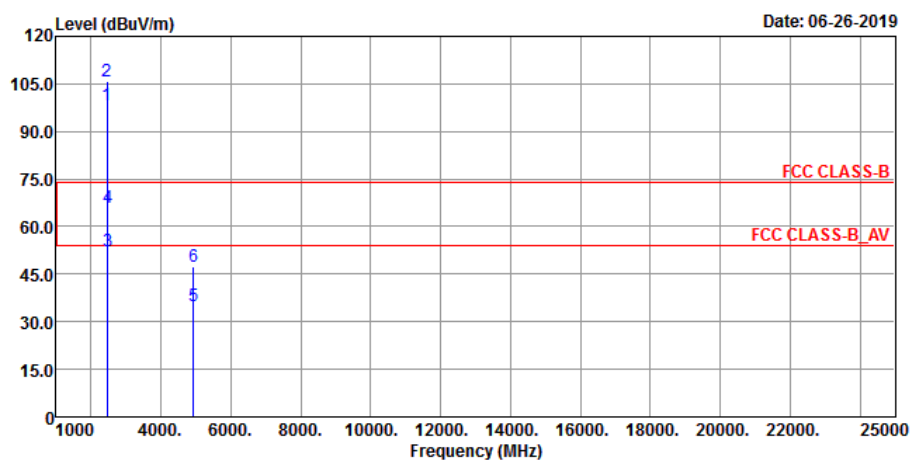
Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	97.71	102.62	-4.91			100	199	Average
2457	104.57	109.48	-4.91			100	199	Peak
2483.56	48.35	53.2	-4.85	54	-5.65	100	199	Average
2483.56	70.41	75.26	-4.85	74	-3.59	100	199	Peak
4914	39.06	53.04	-13.98	54	-14.94	100	37	Average
4914	47.81	61.79	-13.98	74	-26.19	100	37	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	94.69	99.6	-4.91			103	120	Average
2457	101.5	106.41	-4.91			103	120	Peak
2484.2	45.38	50.23	-4.85	54	-8.62	103	120	Average
2484.2	65.24	70.09	-4.85	74	-8.76	103	120	Peak
4914	38.92	52.9	-13.98	54	-15.08	104	107	Average
4914	46.38	60.36	-13.98	74	-27.62	104	107	Peak

Remarks:

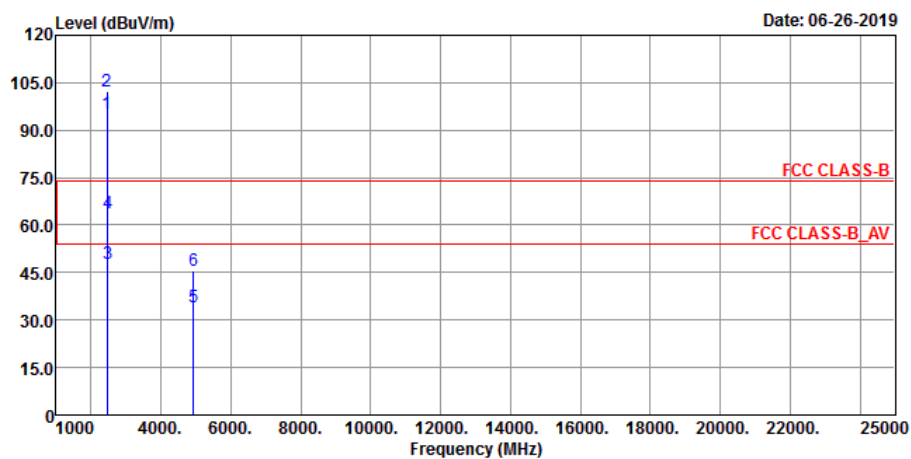
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2457 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	98.51	66.03	32.48			100	199	Average
2462	106.05	73.57	32.48			100	199	Peak
2483.72	52.06	56.91	-4.85	54	-1.94	100	199	Average
2483.72	65.96	70.81	-4.85	74	-8.04	100	199	Peak
4924	34.77	48.73	-13.96	54	-19.23	125	215	Average
4924	47.5	61.46	-13.96	74	-26.5	125	215	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	95.36	62.88	32.48			108	138	Average
2462	102.24	69.76	32.48			108	138	Peak
2483.56	47.98	52.83	-4.85	54	-6.02	108	138	Average
2483.56	63.65	68.5	-4.85	74	-10.35	108	138	Peak
4924	33.99	47.95	-13.96	54	-20.01	123	79	Average
4924	45.77	59.73	-13.96	74	-28.23	123	79	Peak

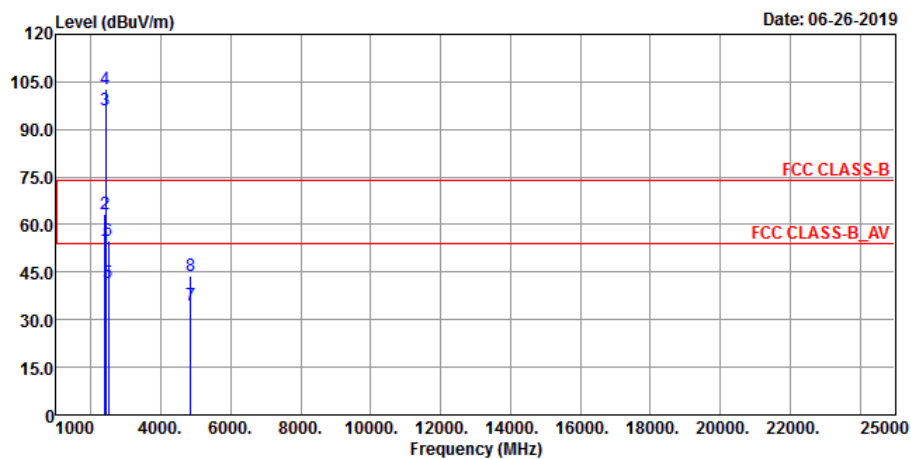
Remarks:

1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

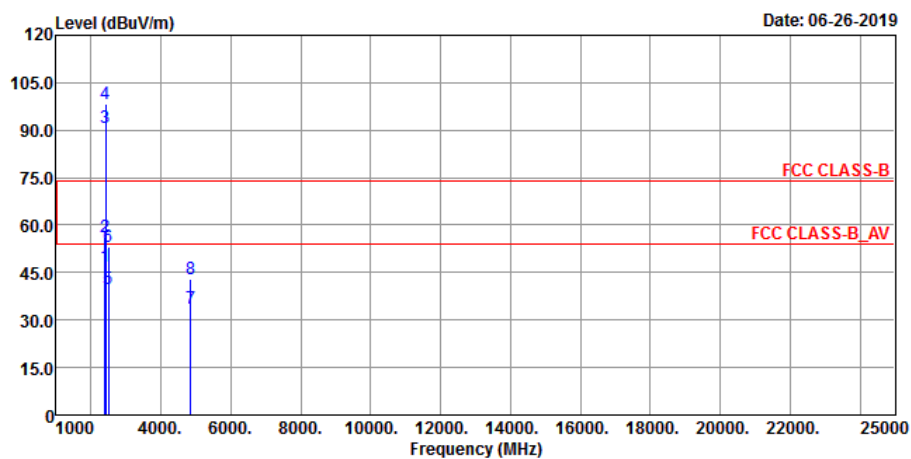
802.11n (HT40)

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.24	52.38	57.36	-4.98	54	-1.62	100	199	Average
2389.24	63.34	68.32	-4.98	74	-10.66	100	199	Peak
2422	96.1	63.61	32.49			100	199	Average
2422	102.79	70.3	32.49			100	199	Peak
2484.96	41.44	46.29	-4.85	54	-12.56	100	199	Average
2484.96	54.7	59.55	-4.85	74	-19.3	100	199	Peak
4844	34.69	48.96	-14.27	54	-19.31	106	224	Average
4844	43.66	57.93	-14.27	74	-30.34	106	224	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

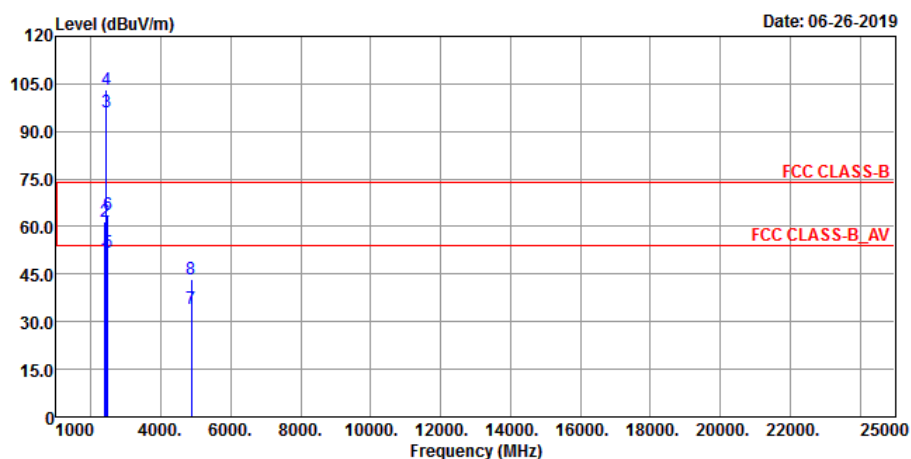
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	47.04	52.04	-5	54	-6.96	130	138	Average
2389.94	56.36	61.36	-5	74	-17.64	130	138	Peak
2422	90.96	58.47	32.49			130	138	Average
2422	98.37	65.88	32.49			130	138	Peak
2484.8	39.75	44.6	-4.85	54	-14.25	130	138	Average
2484.8	53.09	57.94	-4.85	74	-20.91	130	138	Peak
4844	33.49	47.76	-14.27	54	-20.51	125	80	Average
4844	43.14	57.41	-14.27	74	-30.86	125	80	Peak

Remarks:

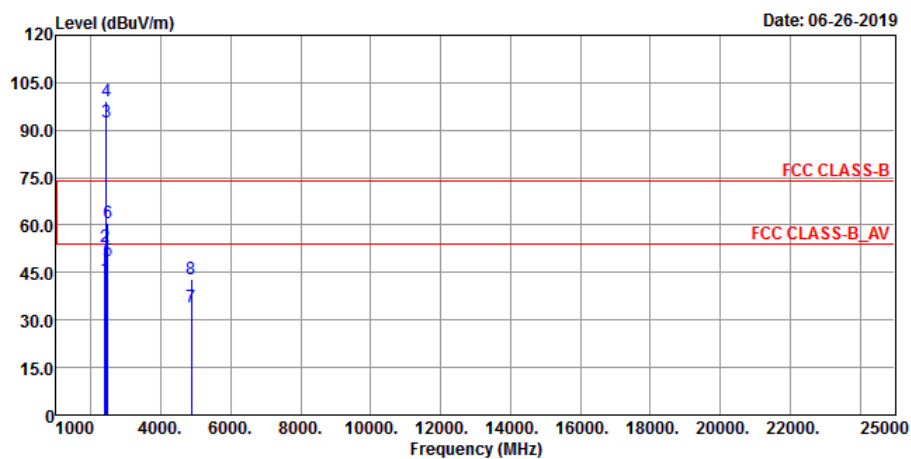
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2422 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.38	50.1	55.08	-4.98	54	-3.9	102	199	Average
2389.38	61.62	66.6	-4.98	74	-12.38	102	199	Peak
2437	96.29	63.81	32.48			102	199	Average
2437	103.23	70.75	32.48			102	199	Peak
2483.56	51.59	56.44	-4.85	54	-2.41	102	199	Average
2483.56	63.66	68.51	-4.85	74	-10.34	102	199	Peak
4874	34.13	48.21	-14.08	54	-19.87	105	225	Average
4874	43.36	57.44	-14.08	74	-30.64	105	225	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

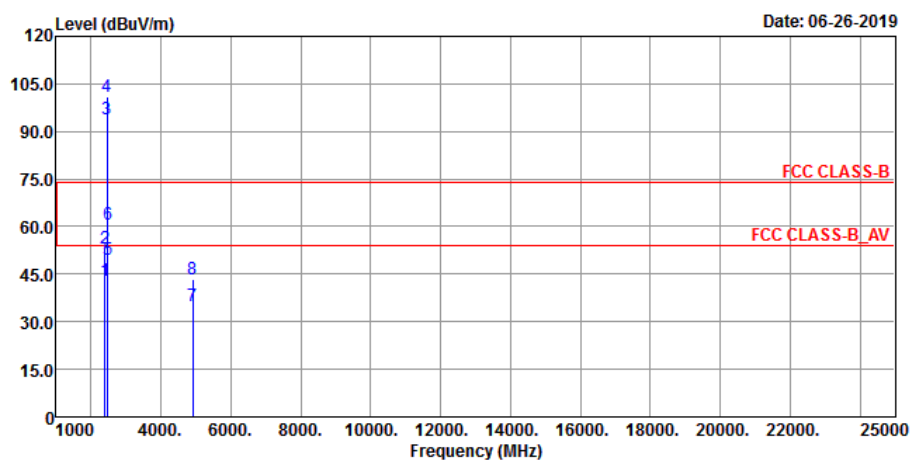
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	42.74	47.74	-5	54	-11.26	149	138	Average
2389.94	53	58	-5	74	-21	149	138	Peak
2437	92.36	59.88	32.48			149	138	Average
2437	99.28	66.8	32.48			149	138	Peak
2483.62	48.79	53.64	-4.85	54	-5.21	149	138	Average
2483.68	60.67	65.52	-4.85	74	-13.33	149	138	Peak
4874	33.93	48.01	-14.08	54	-20.07	124	78	Average
4874	42.98	57.06	-14.08	74	-31.02	124	78	Peak

Remarks:

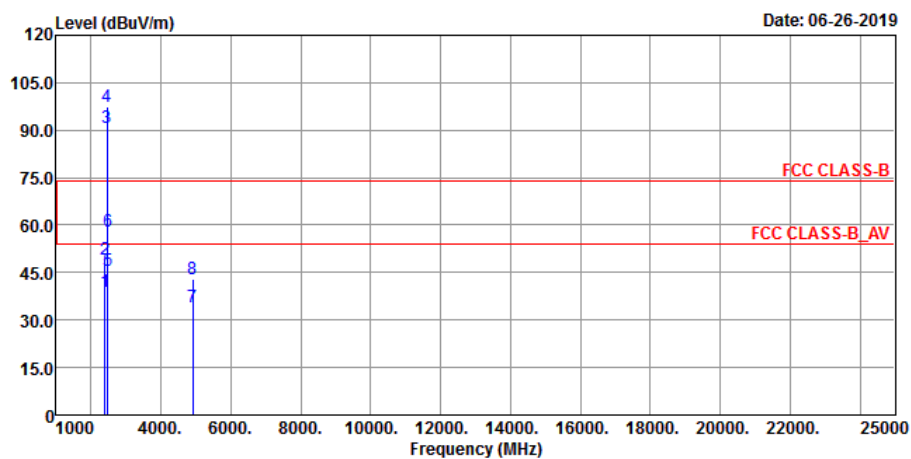
1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.24	42.89	47.87	-4.98	54	-11.11	100	199	Average
2389.24	53.34	58.32	-4.98	74	-20.66	100	199	Peak
2452	94.03	61.55	32.48			100	199	Average
2452	100.93	68.45	32.48			100	199	Peak
2483.52	49.71	54.56	-4.85	54	-4.29	100	199	Average
2483.52	60.77	65.62	-4.85	74	-13.23	100	199	Peak
4904	34.88	48.86	-13.98	54	-19.12	111	221	Average
4904	43.34	57.32	-13.98	74	-30.66	111	221	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.66	38.93	43.91	-4.98	54	-15.07	108	138	Average
2389.66	49.32	54.3	-4.98	74	-24.68	108	138	Peak
2452	90.83	58.35	32.48			108	138	Average
2452	97.62	65.14	32.48			108	138	Peak
2483.52	45.47	50.32	-4.85	54	-8.53	108	138	Average
2483.52	57.95	62.8	-4.85	74	-16.05	108	138	Peak
4904	33.98	47.96	-13.98	54	-20.02	122	77	Average
4904	43.16	57.14	-13.98	74	-30.84	122	77	Peak

Remarks:

1. Emission Level = Read Level + Factor
Margin value = Emission level – Limit value
2. 2452 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

9 kHz ~ 30 MHz Data:

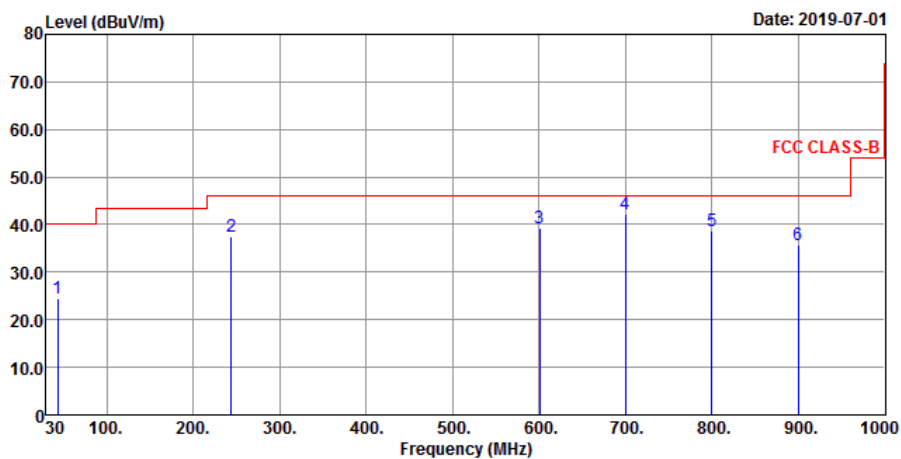
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

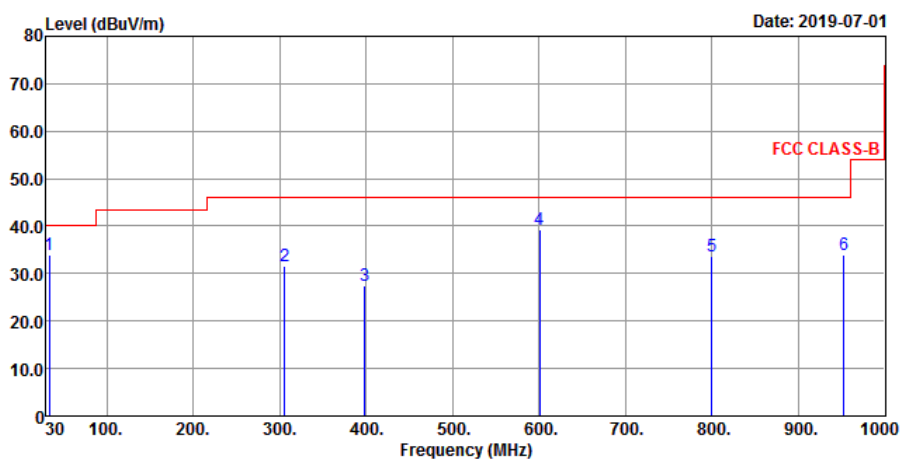
802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 3	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	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
43.58	24.63	41.58	-16.95	40	-15.37	194	211	Peak
244.37	37.47	55.34	-17.87	46	-8.53	211	103	Peak
600.36	39.37	47.66	-8.29	46	-6.63	191	176	Peak
700.27	42.33	49.32	-6.99	46	-3.67	189	176	Peak
800.18	38.67	43.94	-5.27	46	-7.33	188	224	Peak
900.09	35.86	40.47	-4.61	46	-10.14	173	206	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	33.88	50.83	-16.95	40	-6.12	101	196	Peak
305.48	31.53	48.02	-16.49	46	-14.47	103	157	Peak
398.6	27.36	41.45	-14.09	46	-18.64	114	118	Peak
600.36	39.17	47.46	-8.29	46	-6.83	102	226	Peak
800.18	33.64	38.91	-5.27	46	-12.36	103	266	Peak
952.47	33.94	36.91	-2.97	46	-12.06	137	198	Peak

Remarks:

- Emission Level = Read Level + Factor
Margin value = Emission level – Limit value.
- The emission levels of other frequencies were very low against the limit.

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 10, 2018	Dec. 09, 2019
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	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 HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

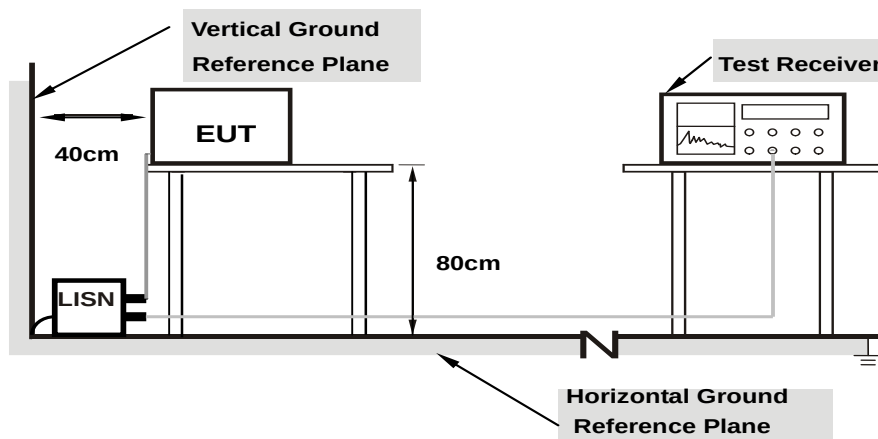
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

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

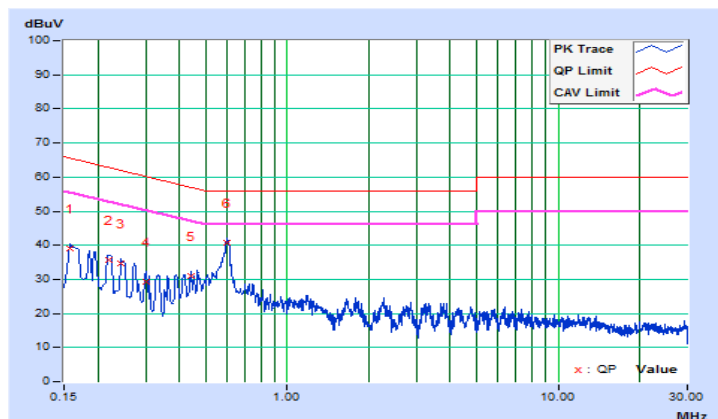
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 75%RH
Tested by	Thomas Wei	Test Date	2019/6/29

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15802	9.84	29.13	11.93	38.97	21.77	65.57	55.57	-26.60	-33.80
2	0.21851	9.85	25.94	11.60	35.79	21.45	62.88	52.88	-27.09	-31.43
3	0.24407	9.86	24.76	10.63	34.62	20.49	61.96	51.96	-27.34	-31.47
4	0.30249	9.87	19.49	5.60	29.36	15.47	60.17	50.17	-30.81	-34.70
5	0.43934	9.88	21.17	8.27	31.05	18.15	57.07	47.07	-26.02	-28.92
6	0.59943	9.89	30.97	21.20	40.86	31.09	56.00	46.00	-15.14	-14.91

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

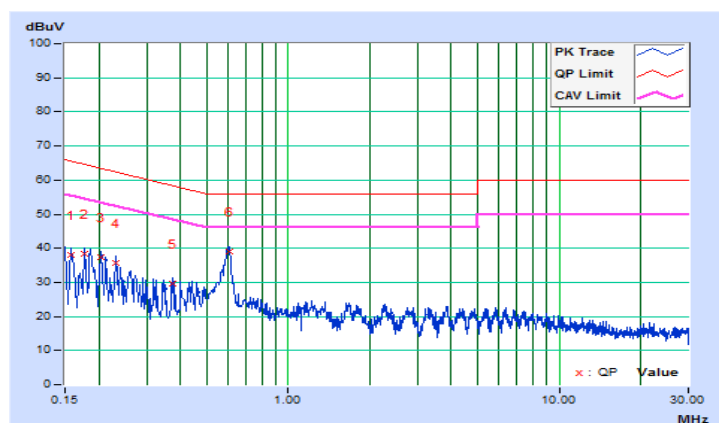


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 75%RH
Tested by	Thomas Wei	Test Date	2019/6/29

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	9.82	28.15	12.18	37.97	22.00	65.58	55.58	-27.61	-33.58
2	0.17737	9.83	28.56	12.35	38.39	22.18	64.61	54.61	-26.22	-32.43
3	0.20458	9.84	27.62	11.32	37.46	21.16	63.42	53.42	-25.96	-32.26
4	0.23211	9.84	25.80	10.28	35.64	20.12	62.37	52.37	-26.73	-32.25
5	0.37287	9.87	19.67	5.38	29.54	15.25	58.44	48.44	-28.90	-33.19
6	0.60418	9.87	29.14	21.12	39.01	30.99	56.00	46.00	-16.99	-15.01

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

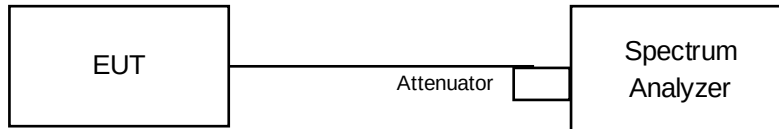


4.3 6 dB Bandwidth Measurement

4.3.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

- Set resolution bandwidth (RBW) = 100 kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

802.11b

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.10	0.5	Pass
6	2437	10.11	0.5	Pass
11	2462	10.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.64	0.5	Pass
6	2437	16.64	0.5	Pass
11	2462	16.64	0.5	Pass

802.11n (HT20)

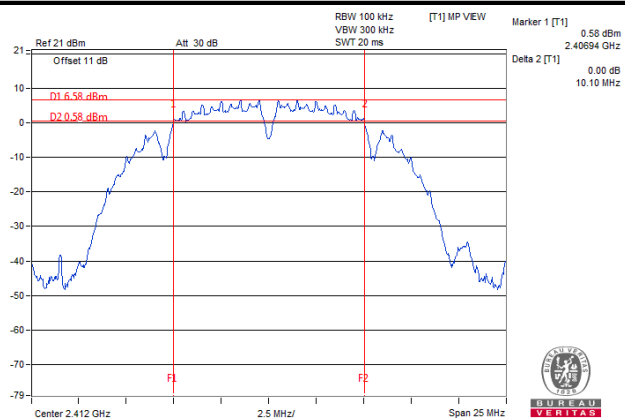
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.78	0.5	Pass
6	2437	17.76	0.5	Pass
11	2462	17.79	0.5	Pass

802.11n (HT40)

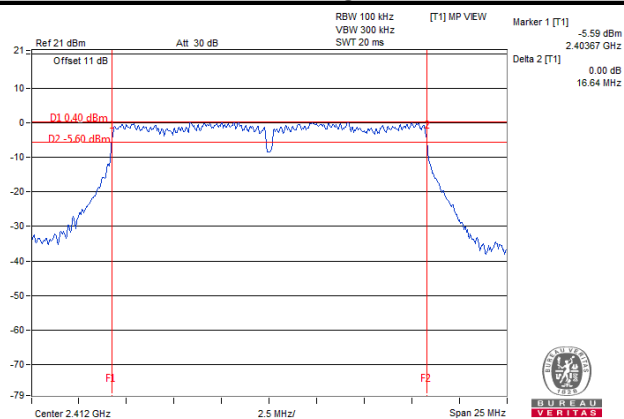
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	36.57	0.5	Pass
6	2437	36.57	0.5	Pass
9	2452	36.58	0.5	Pass

Spectrum Plot of Worst Value

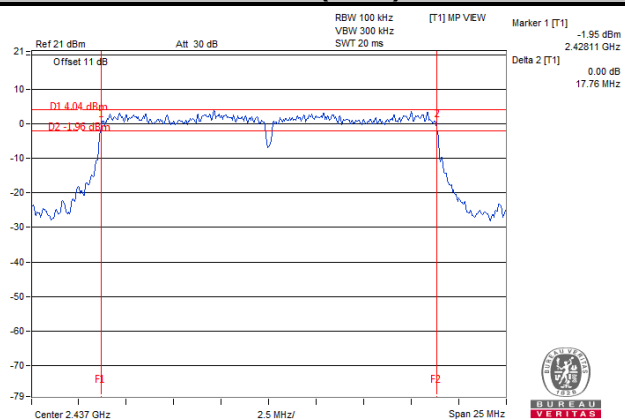
802.11b



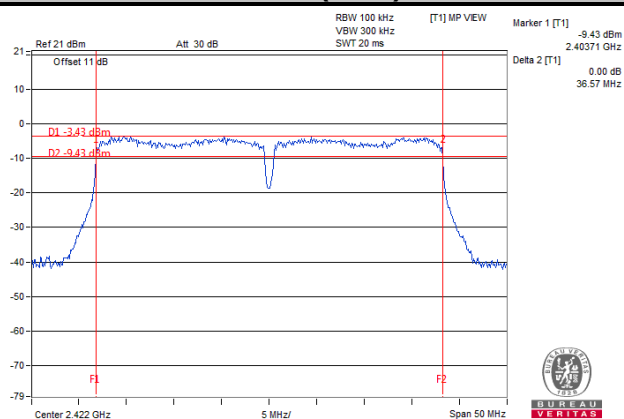
802.11g



802.11n (HT20)

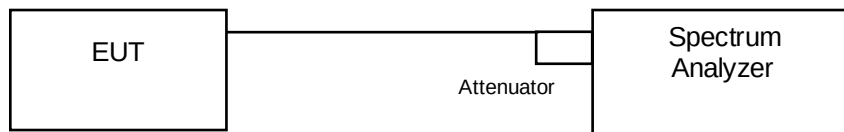


802.11n (HT40)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1 % to 5 % of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to PEAK. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.4.4 Deviation from Test Standard

No deviation.

4.4.5 EUT Operating Conditions

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

4.4.6 Test Results

802.11b

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	13.48	Pass
6	2437	13.56	Pass
11	2462	13.56	Pass

802.11g

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	16.80	Pass
6	2437	17.16	Pass
11	2462	16.80	Pass

802.11n (HT20)

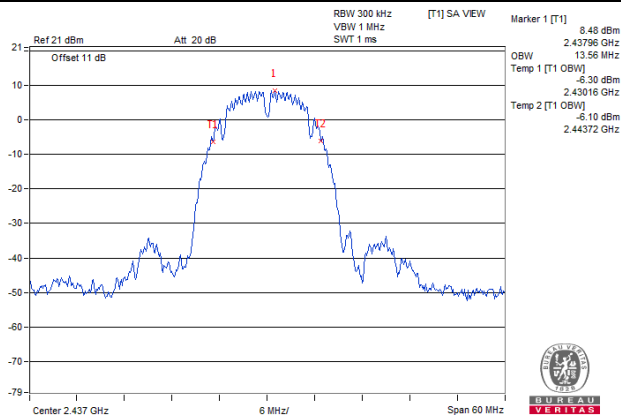
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	17.76	Pass
6	2437	17.88	Pass
11	2462	17.76	Pass

802.11n (HT40)

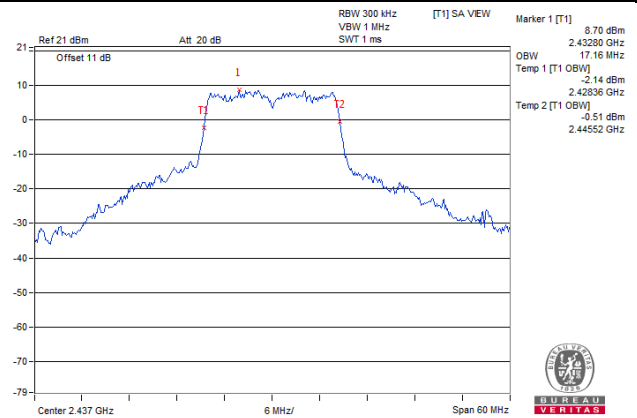
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
3	2422	36.48	Pass
6	2437	36.48	Pass
9	2452	36.48	Pass

Spectrum Plot of Worst Value

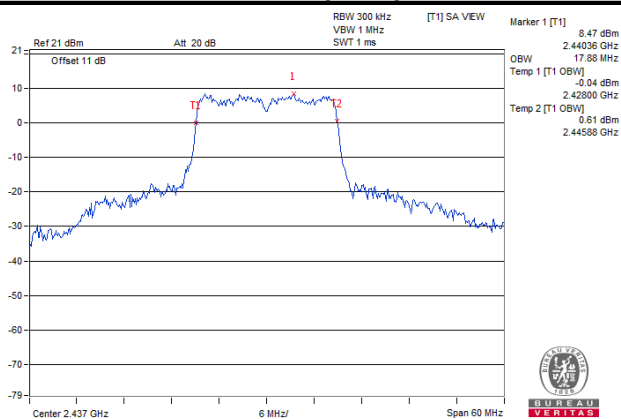
802.11b



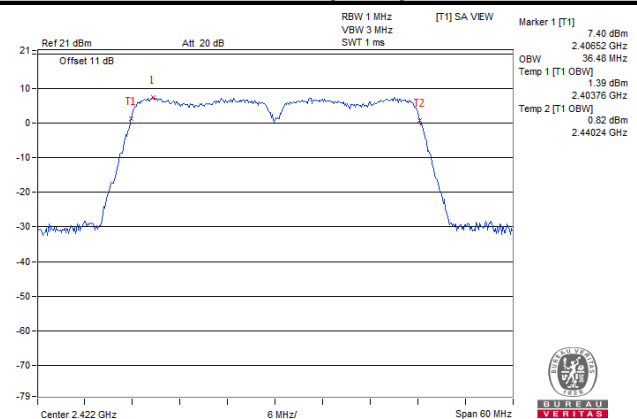
802.11g



802.11n (HT20)



802.11n (HT40)

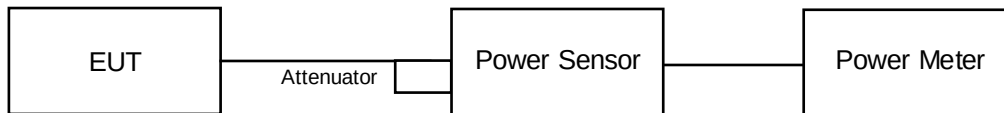


4.5 Conducted Output Power Measurement

4.5.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30 dBm)

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	69.343	18.41	30	Pass
6	2437	70.958	18.51	30	Pass
11	2462	69.183	18.40	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	34.514	15.38	30	Pass
2	2417	55.847	17.47	30	Pass
6	2437	66.681	18.24	30	Pass
10	2457	54.702	17.38	30	Pass
11	2462	32.81	15.16	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	35.727	15.53	30	Pass
2	2417	55.208	17.42	30	Pass
6	2437	69.663	18.43	30	Pass
10	2457	44.157	16.45	30	Pass
11	2462	34.914	15.43	30	Pass

802.11n (HT40)

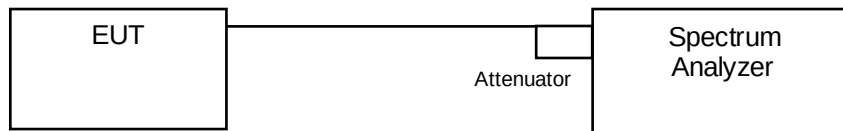
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	29.04	14.63	30	Pass
6	2437	35.81	15.54	30	Pass
9	2452	22.803	13.58	30	Pass

4.6 Power Spectral Density Measurement

4.6.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq 3 \times \text{RBW}$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11b

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
1	2412	-10.44	8	Pass
6	2437	-10.44	8	Pass
11	2462	-10.47	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
1	2412	-15.02	8	Pass
6	2437	-12.17	8	Pass
11	2462	-15.30	8	Pass

802.11n (HT20)

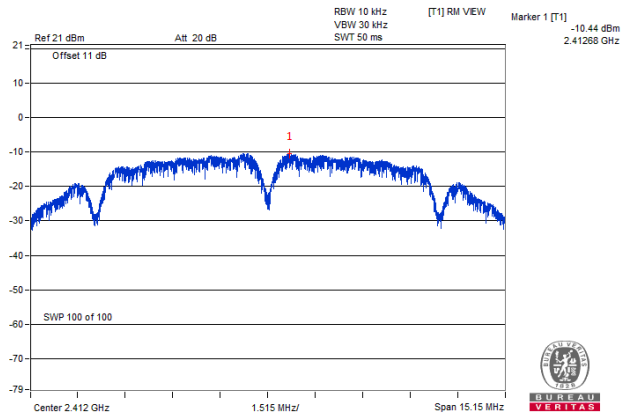
Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
1	2412	-14.94	8	Pass
6	2437	-12.37	8	Pass
11	2462	-15.08	8	Pass

802.11n (HT40)

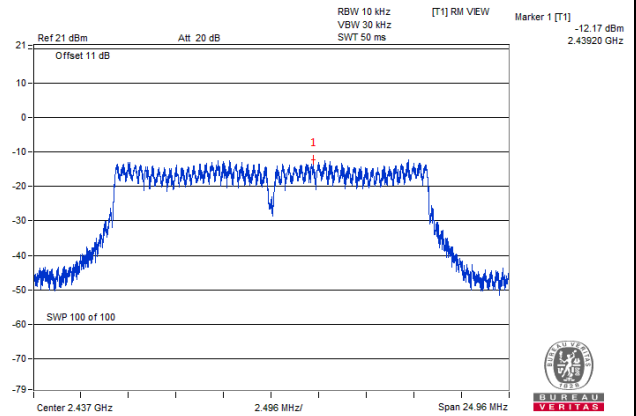
Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
3	2422	-19.24	8	Pass
6	2437	-18.00	8	Pass
9	2452	-18.99	8	Pass

Spectrum Plot of Worst Value

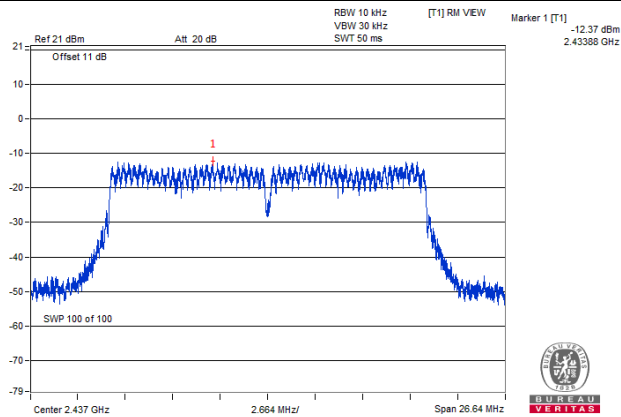
802.11b



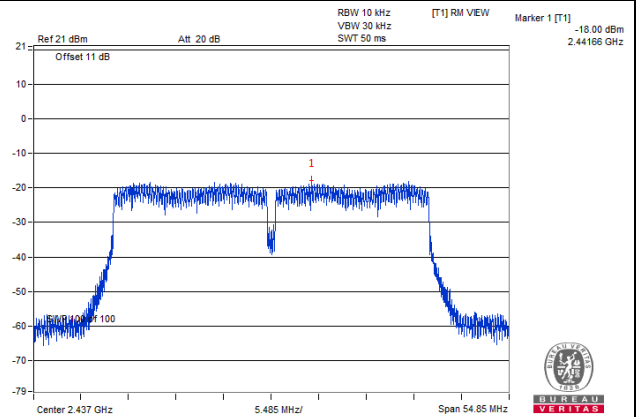
802.11g



802.11n (HT20)



802.11n (HT40)

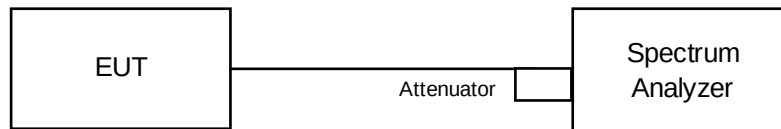


4.7 Conducted Out of Band Emission Measurement

4.7.1 Limits of Conducted Out of Band Emission Measurement

Below -30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.7.5 Deviation from Test Standard

No deviation.

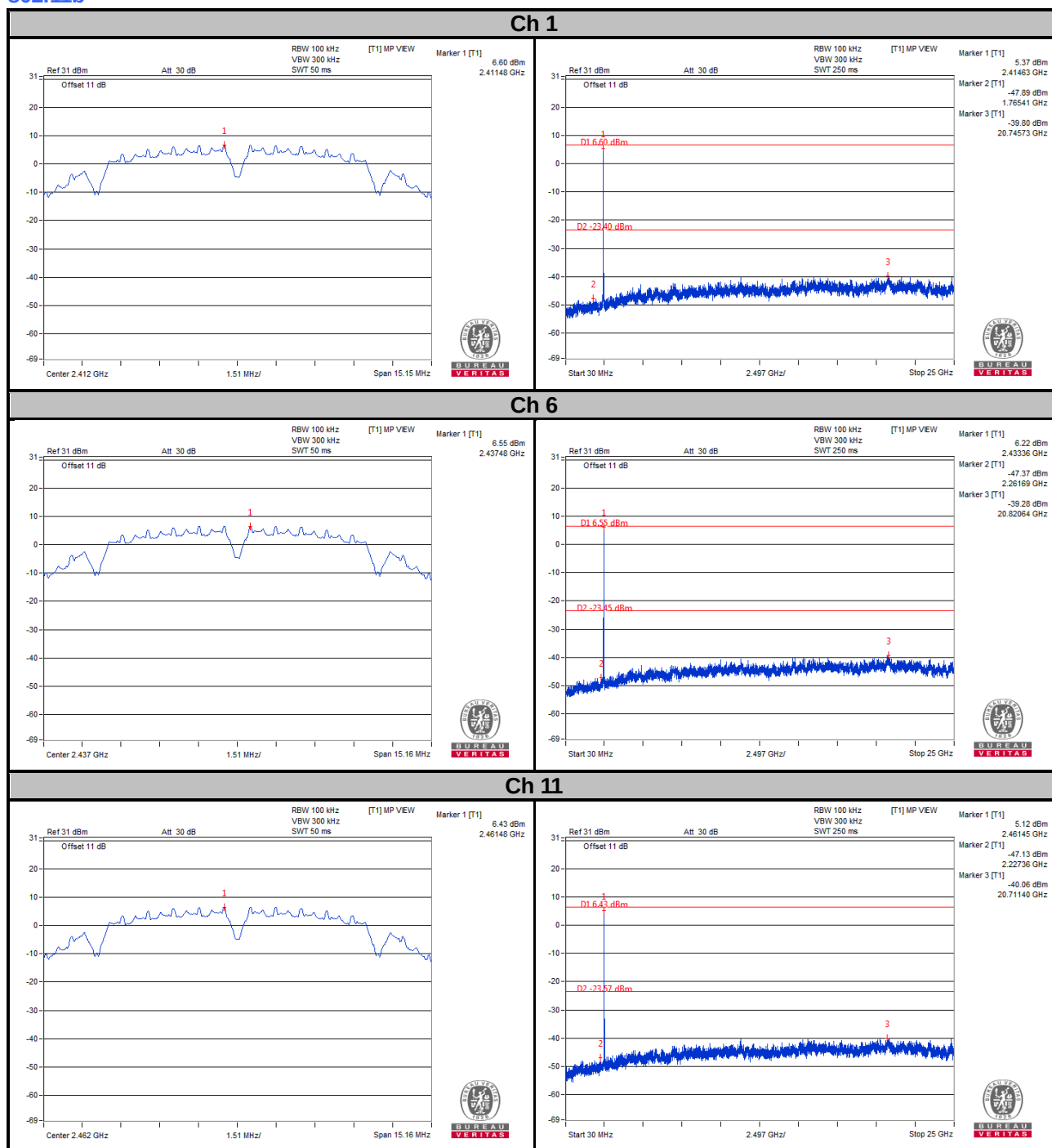
4.7.6 EUT Operating Condition

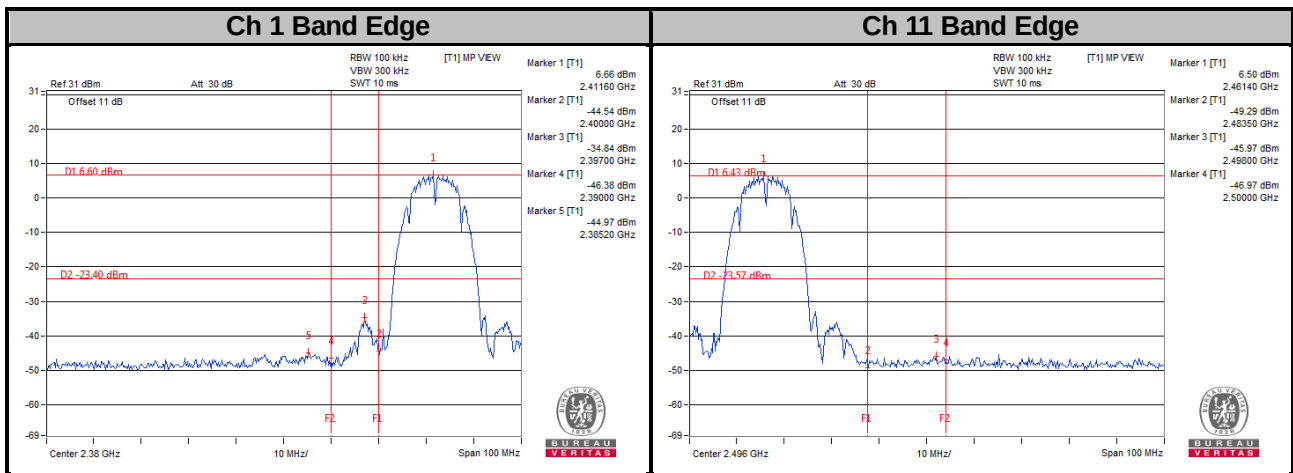
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

The spectrum plots are attached on the following images. D1 line indicates the highest level, and D2 line indicates the 30 dB offset below D1. It shows compliance with the requirement.

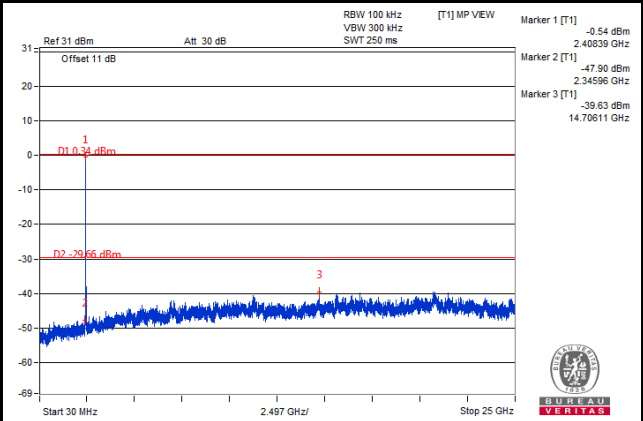
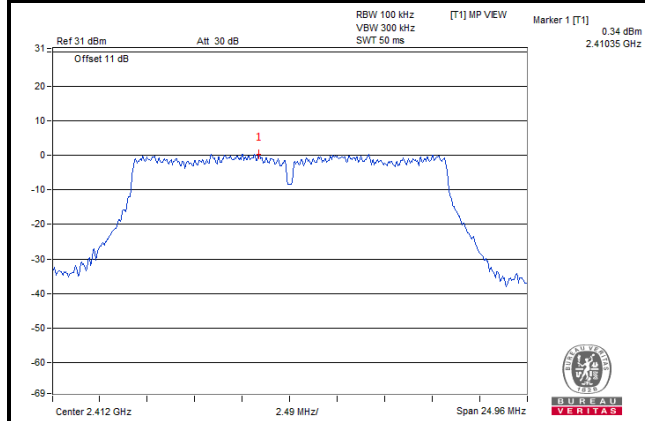
802.11b



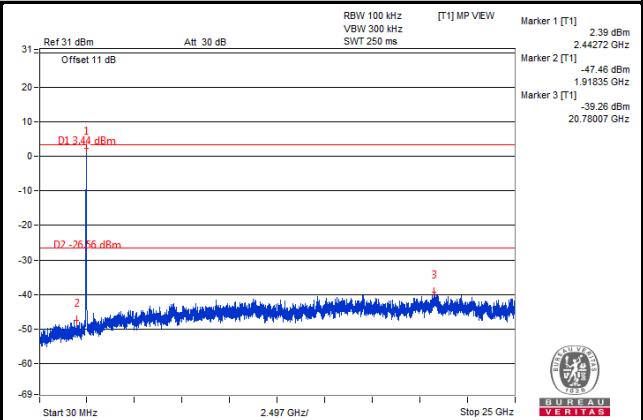
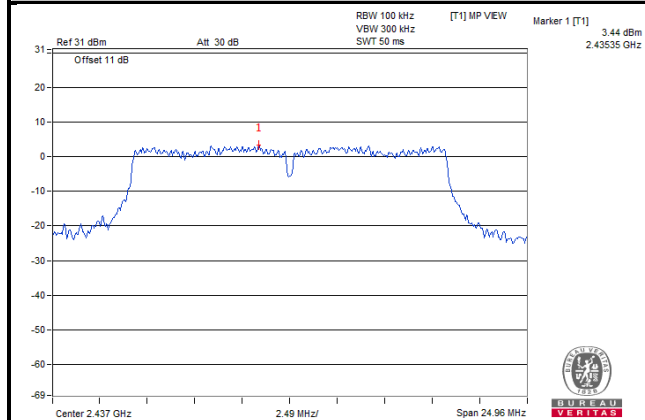


802.11g

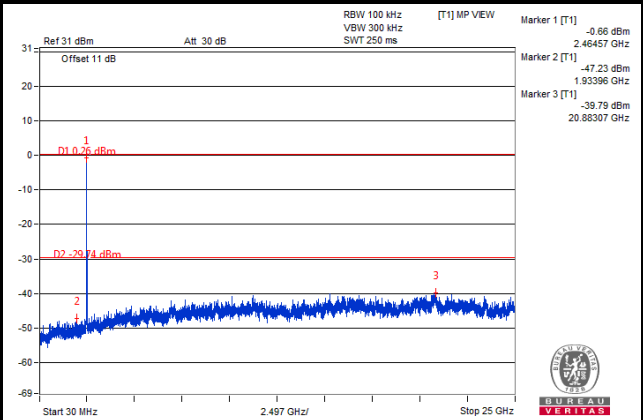
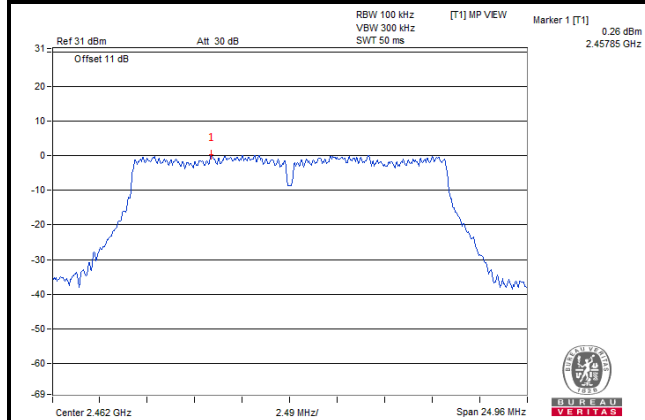
Ch 1

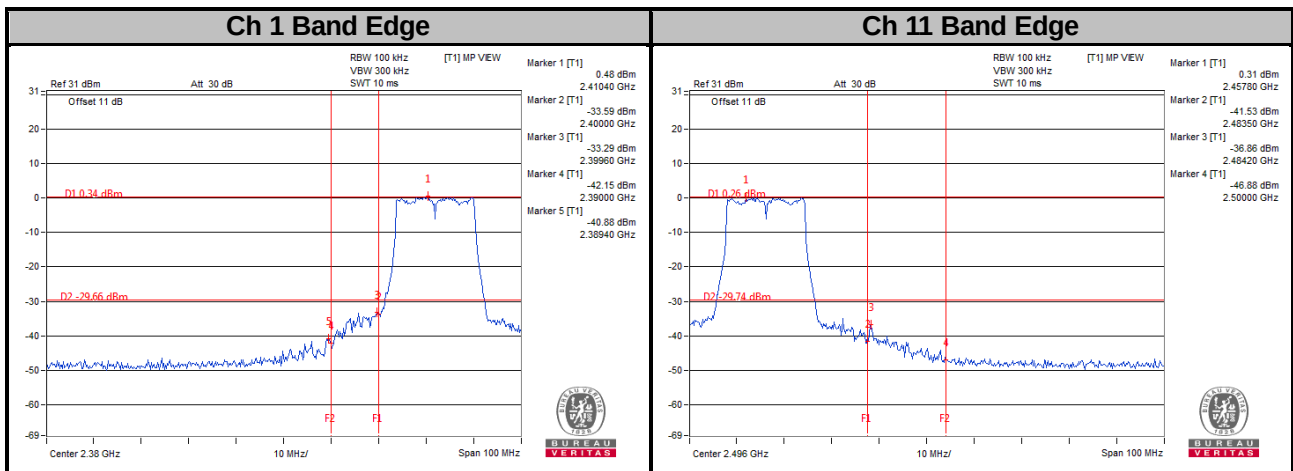


Ch 6



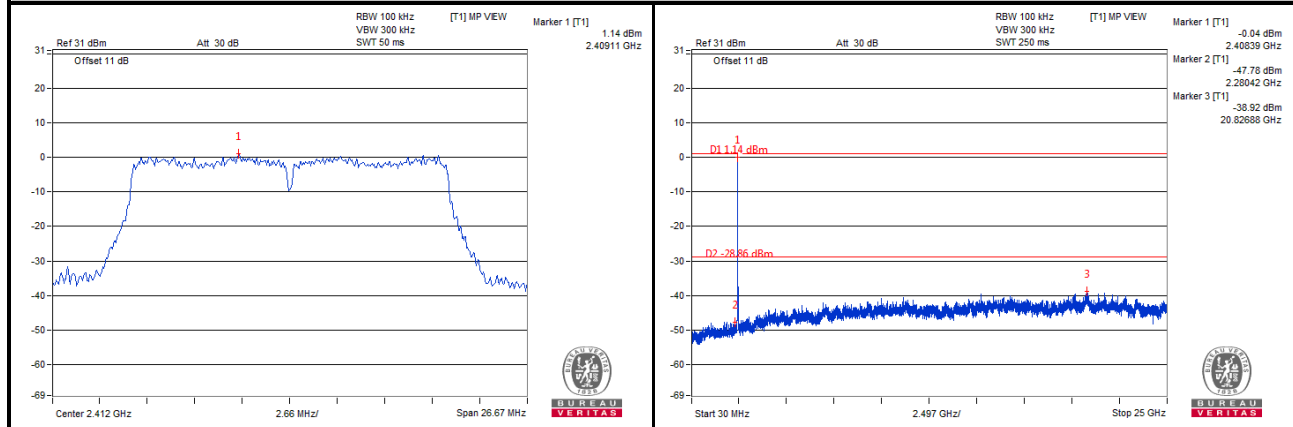
Ch 11



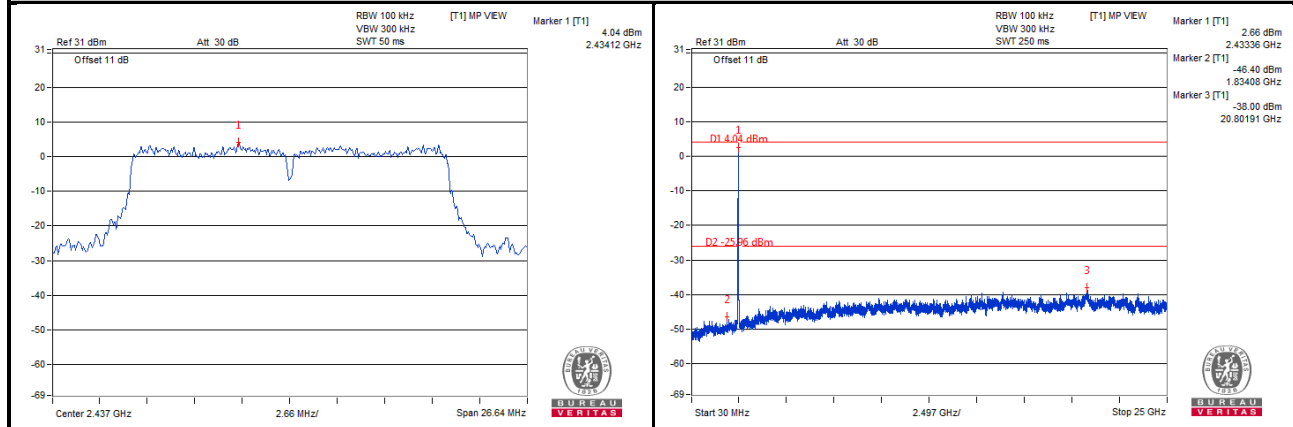


802.11n (HT20)

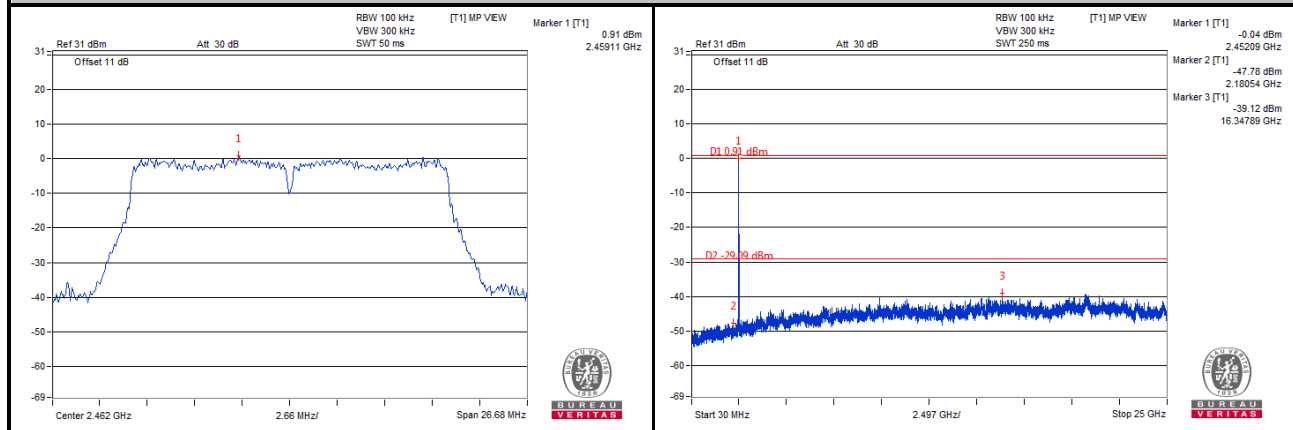
Ch 1

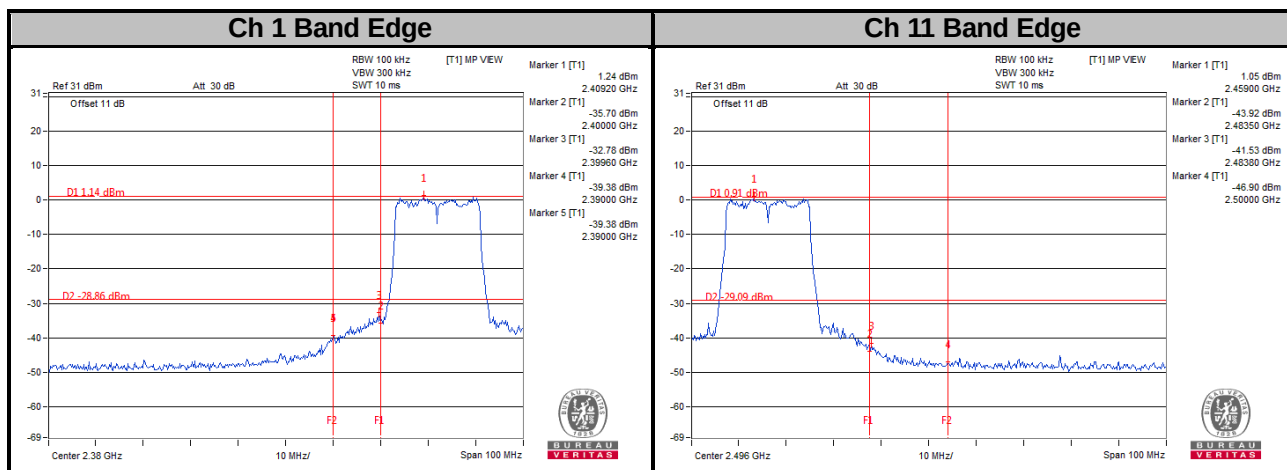


Ch 6



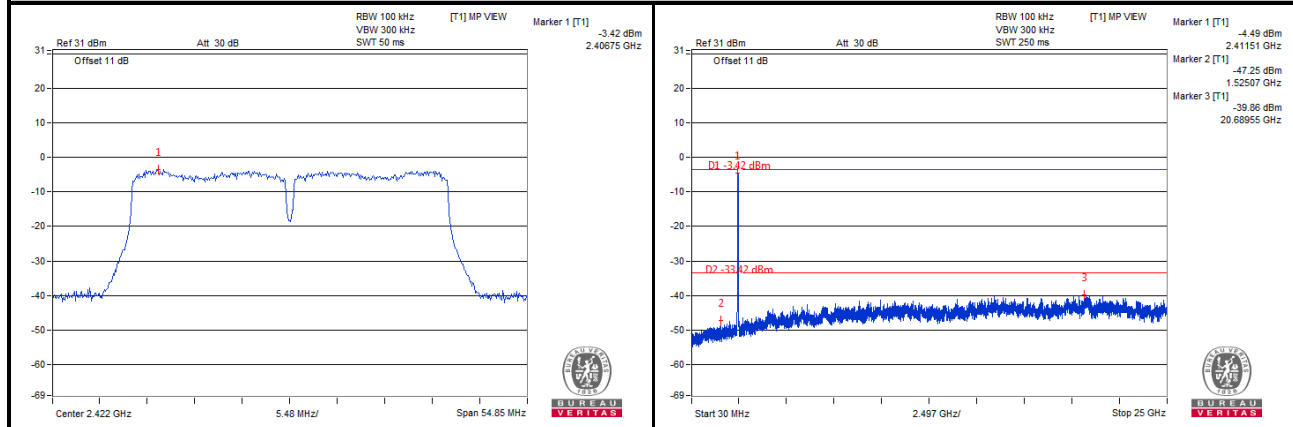
Ch 11



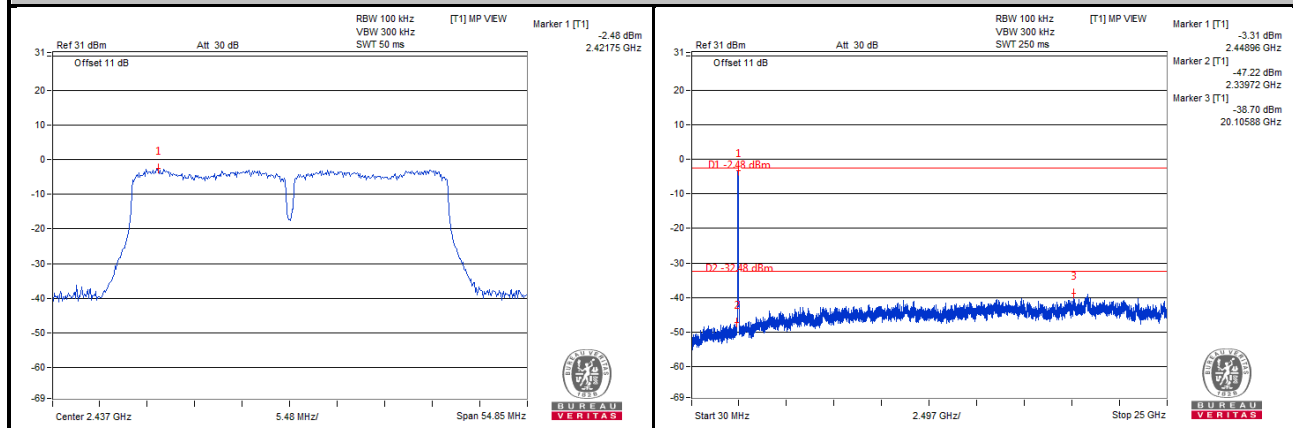


802.11n (HT40)

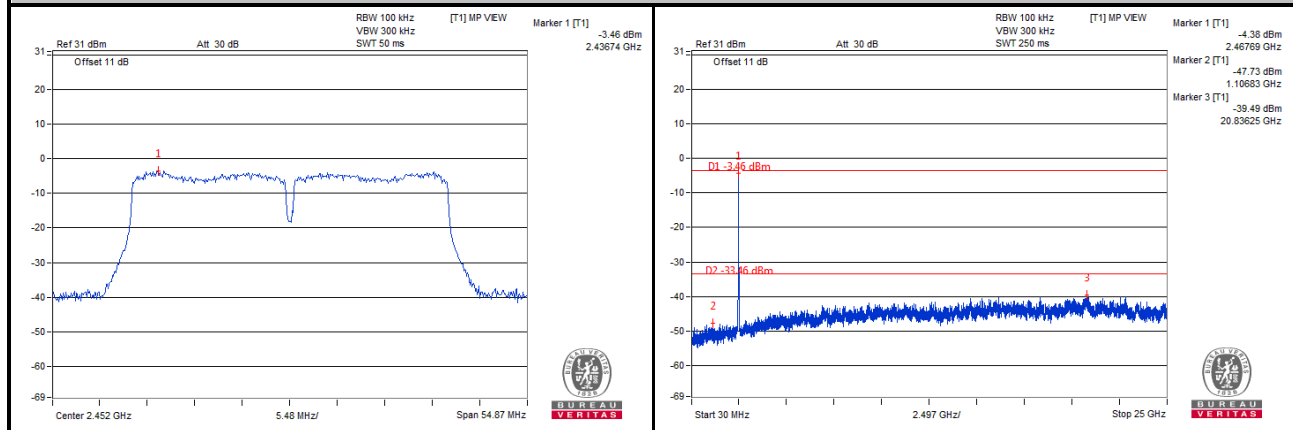
Ch 3

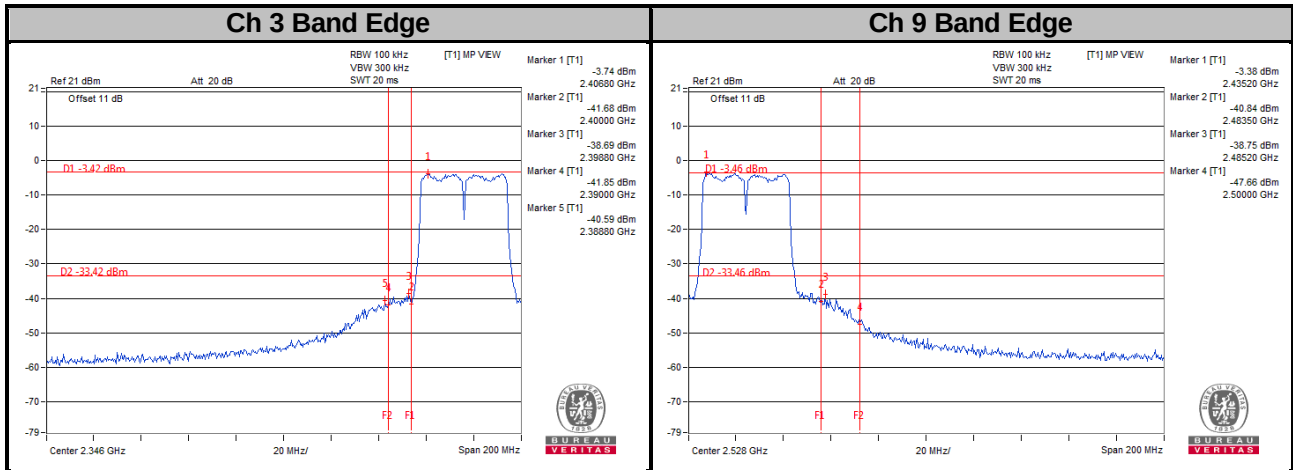


Ch 6



Ch 9



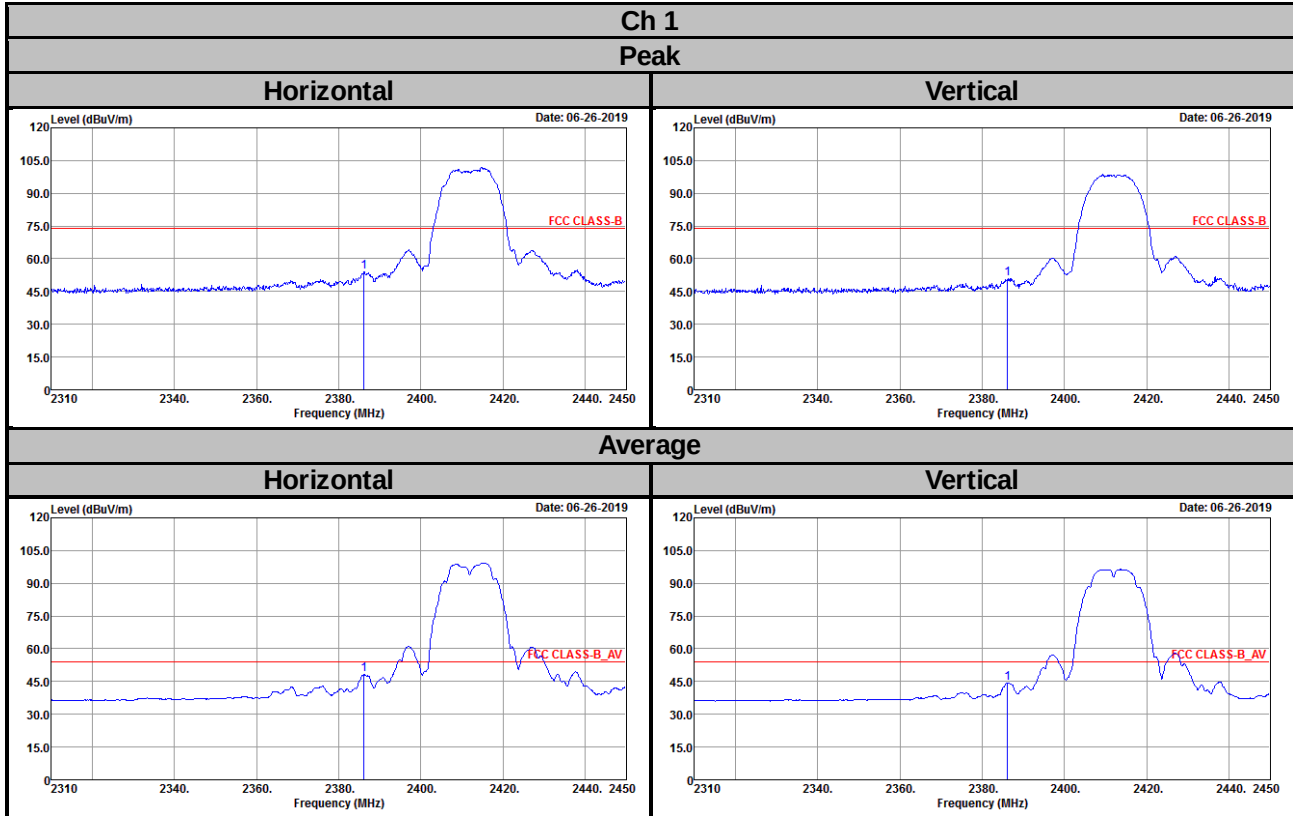


5 Pictures of Test Arrangements

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

Annex A- Band-edge Measurement

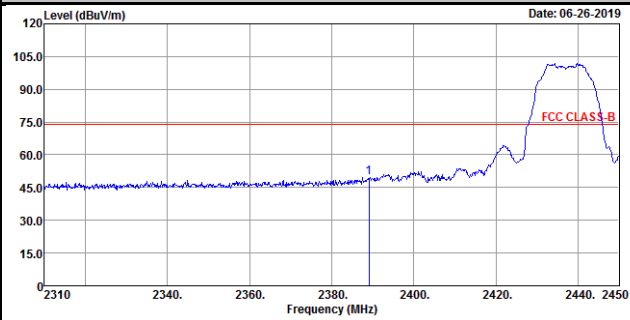
802.11b



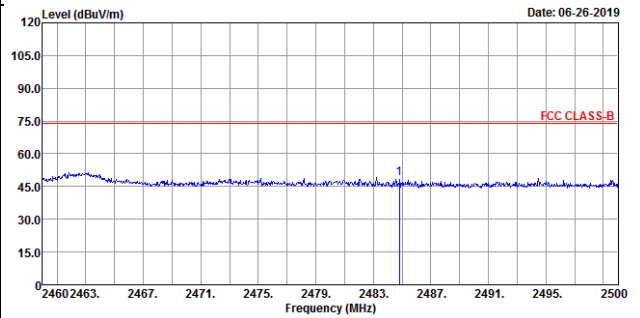
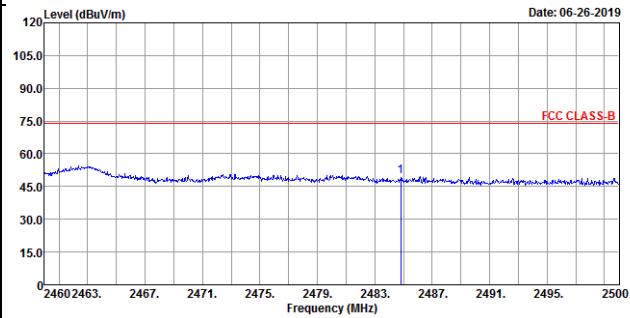
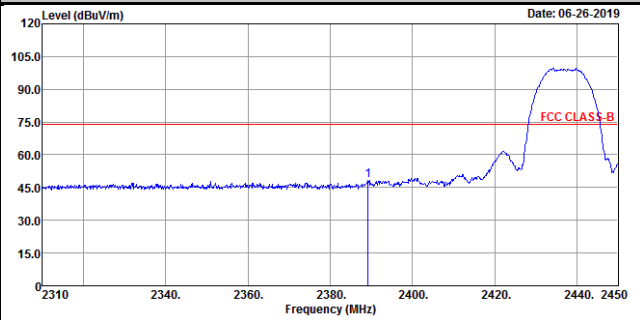
Ch 6

Peak

Horizontal

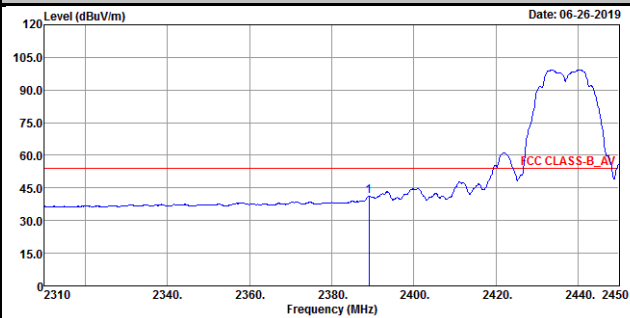


Vertical

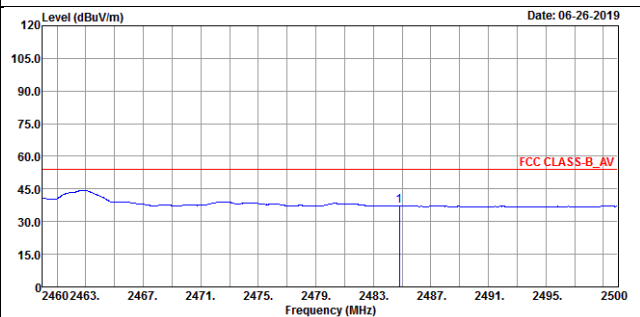
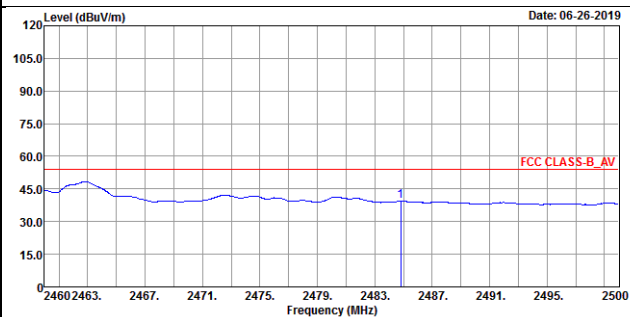
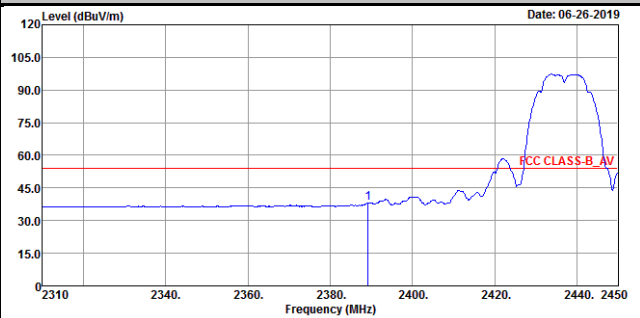


Average

Horizontal



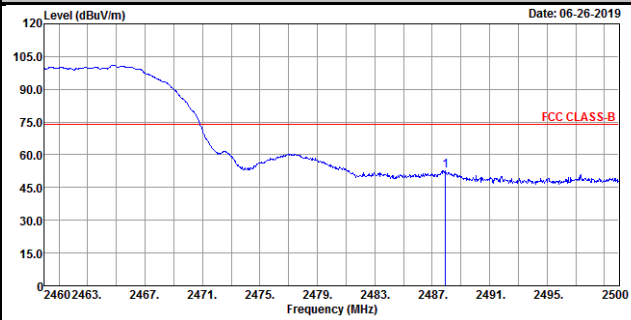
Vertical



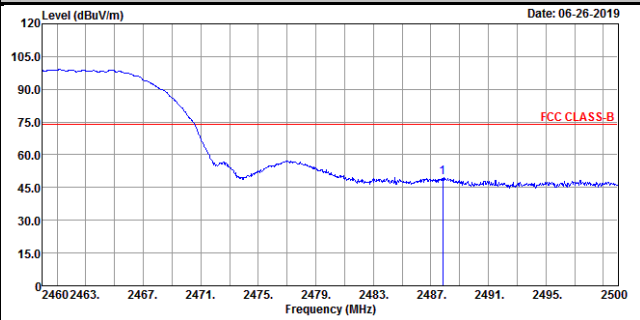
Ch 11

Peak

Horizontal

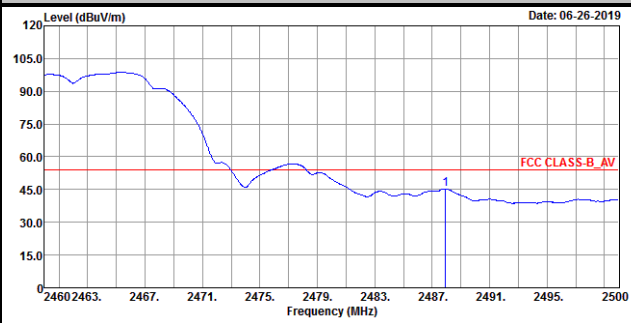


Vertical

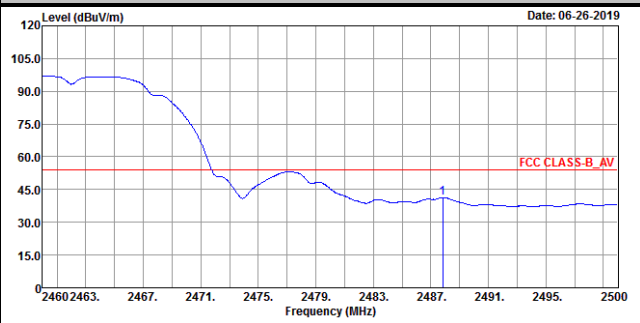


Average

Horizontal



Vertical

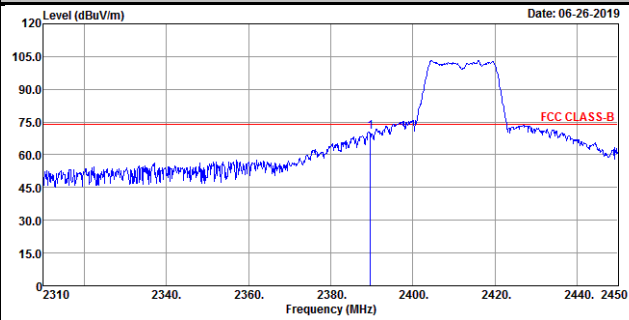


802.11g

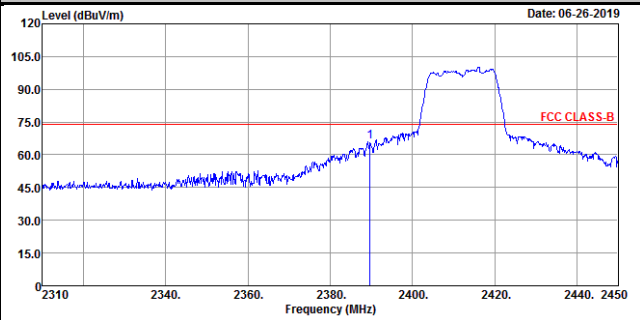
Ch 1

Peak

Horizontal

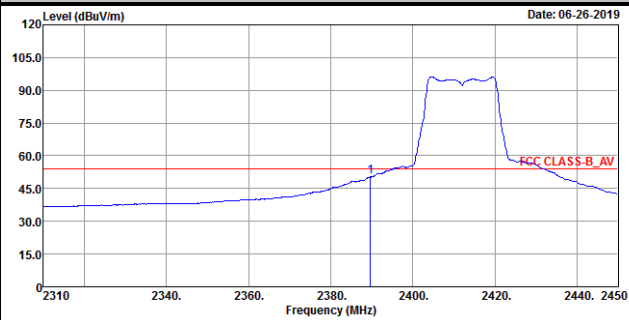


Vertical

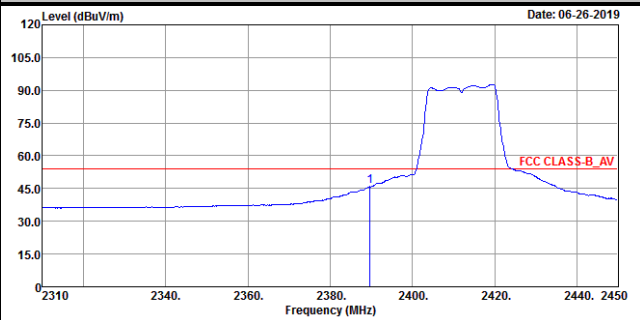


Average

Horizontal



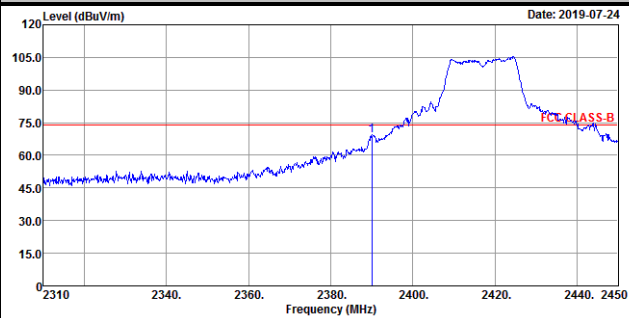
Vertical



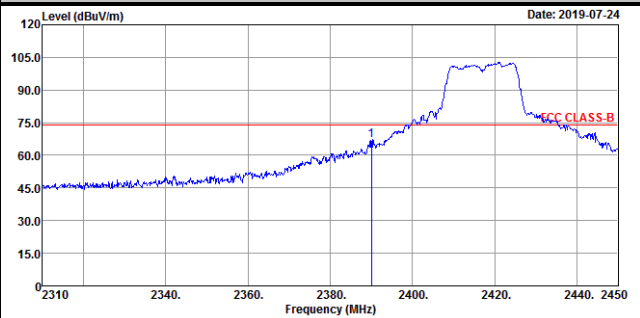
Ch 2

Peak

Horizontal

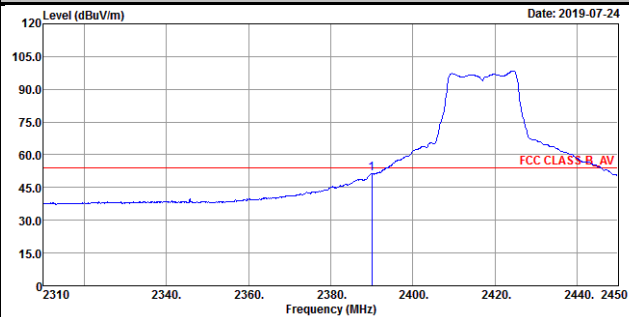


Vertical

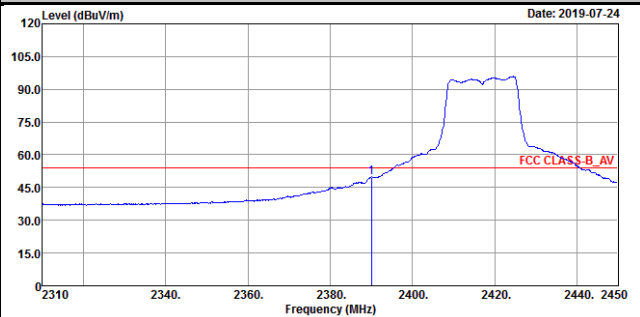


Average

Horizontal



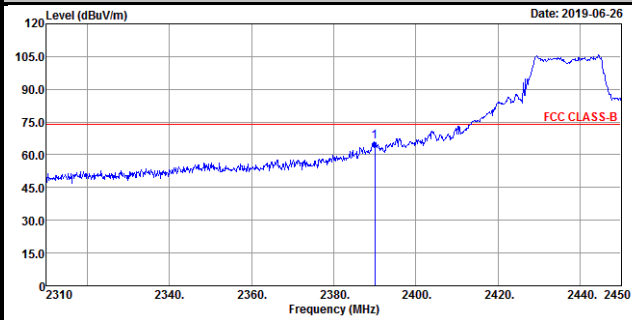
Vertical



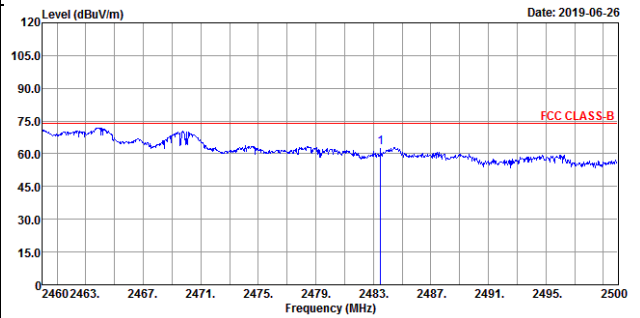
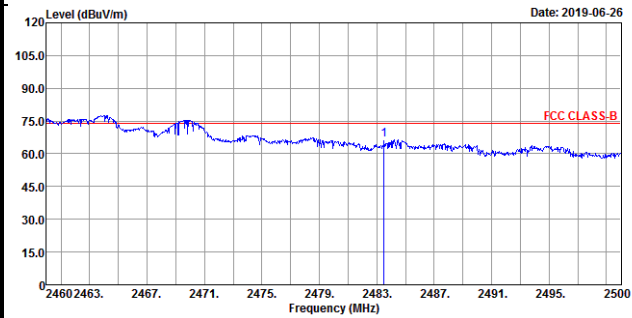
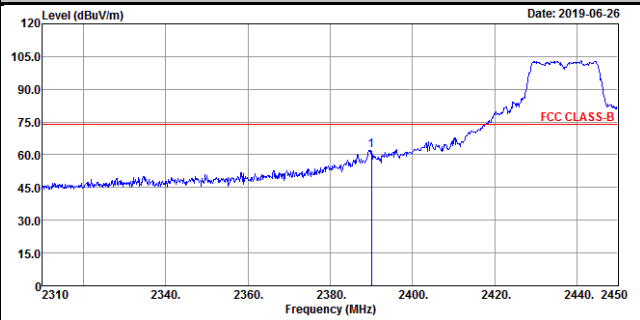
Ch 6

Peak

Horizontal

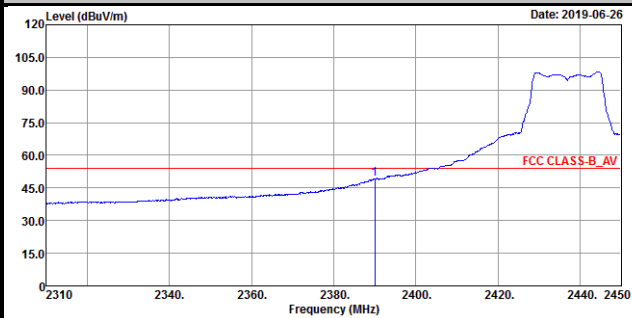


Vertical

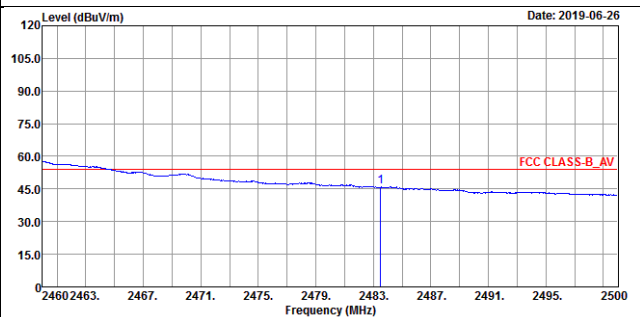
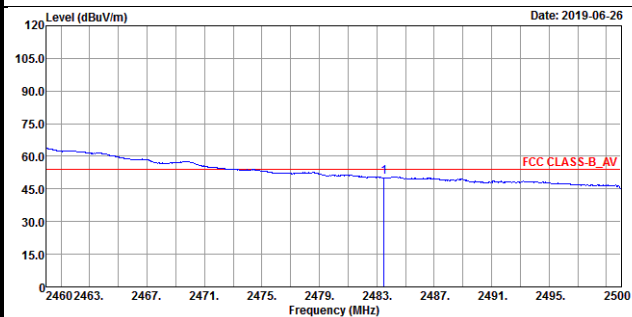
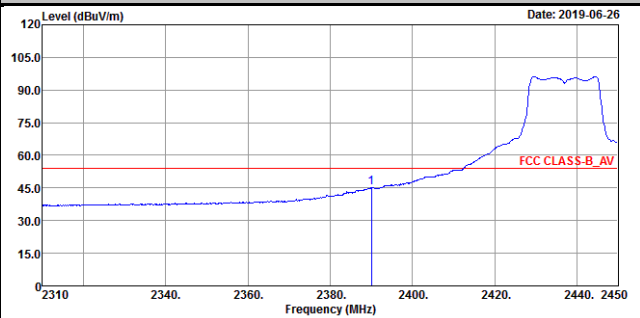


Average

Horizontal



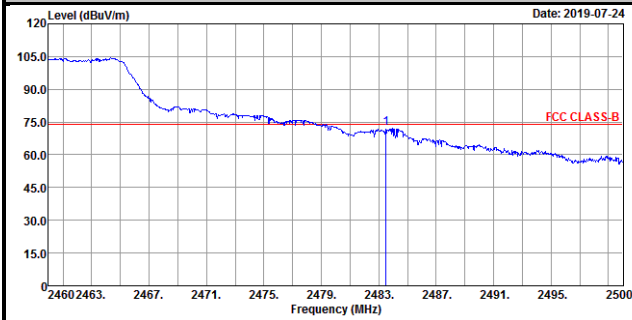
Vertical



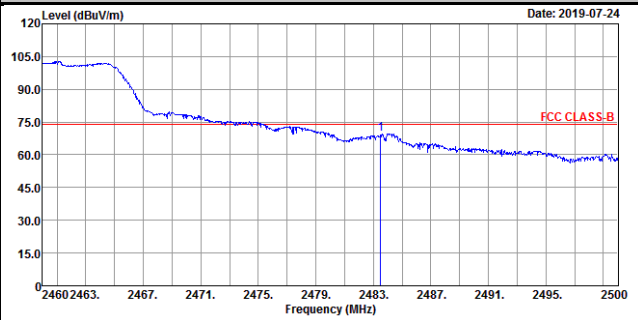
Ch 10

Peak

Horizontal

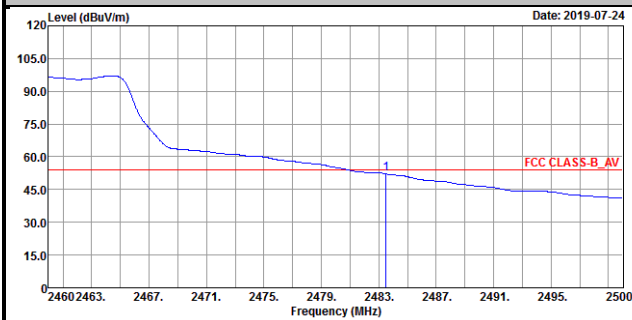


Vertical

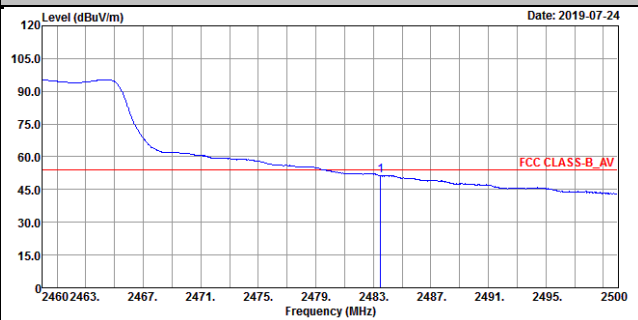


Average

Horizontal



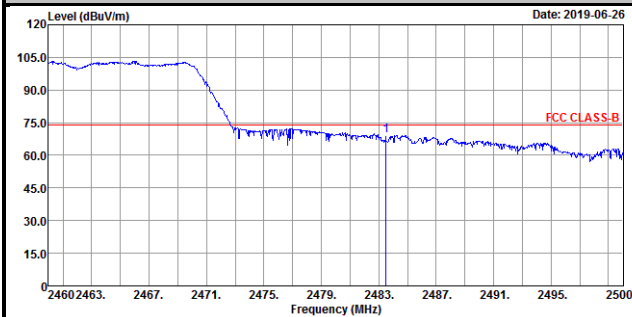
Vertical



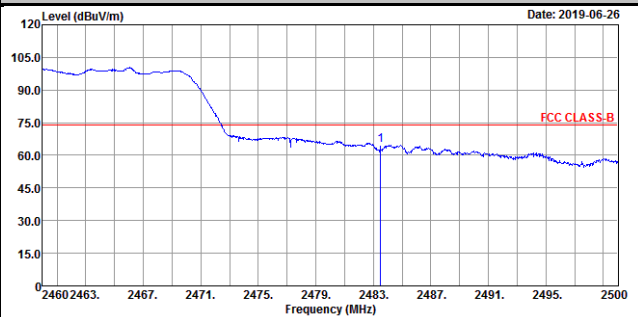
Ch 11

Peak

Horizontal

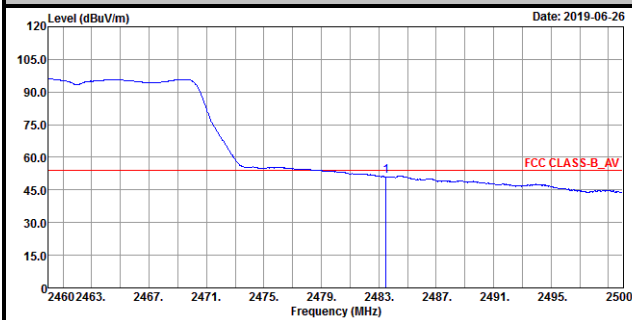


Vertical

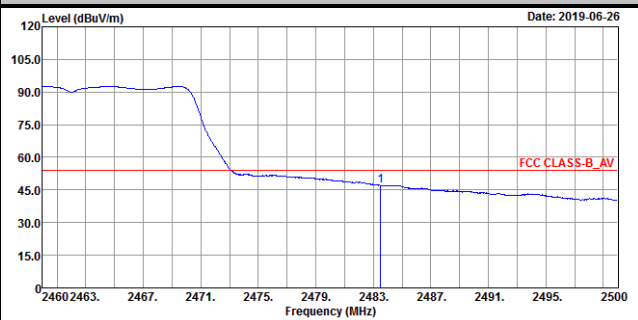


Average

Horizontal



Vertical

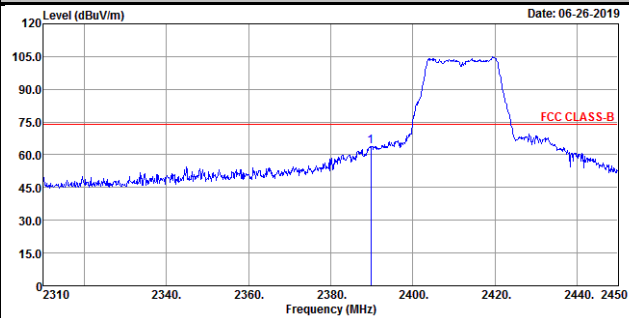


802.11n (HT20)

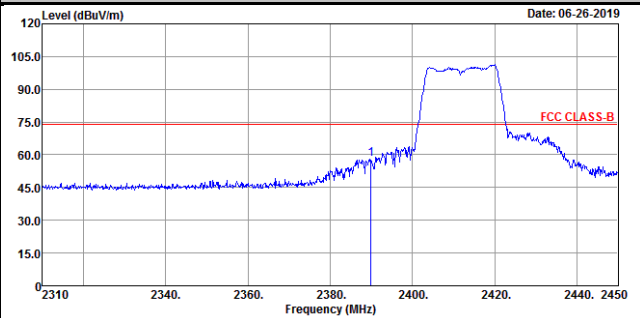
Ch 1

Peak

Horizontal

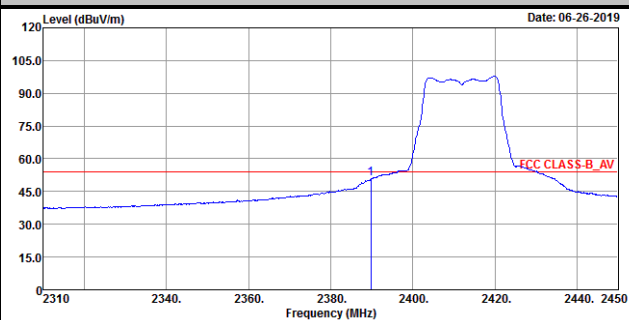


Vertical

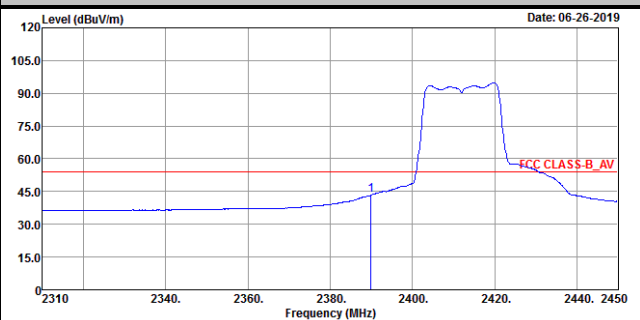


Average

Horizontal



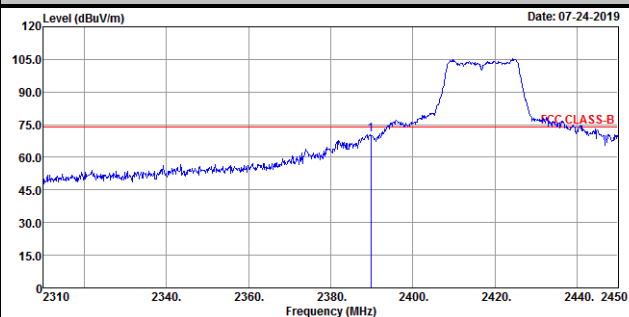
Vertical



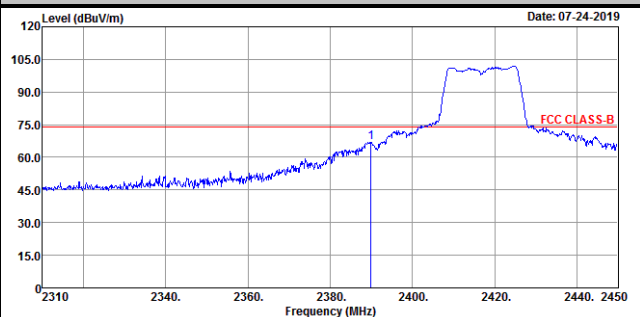
Ch 2

Peak

Horizontal

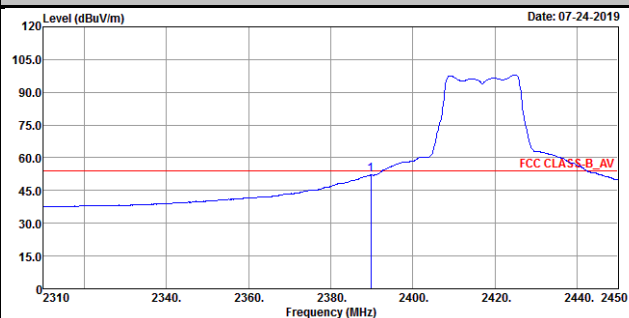


Vertical

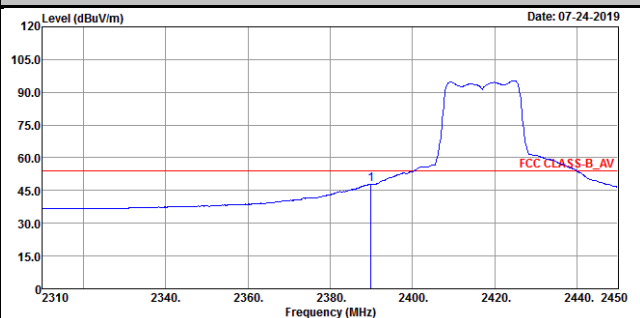


Average

Horizontal



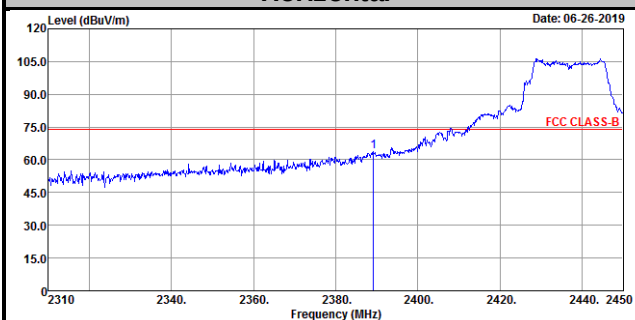
Vertical



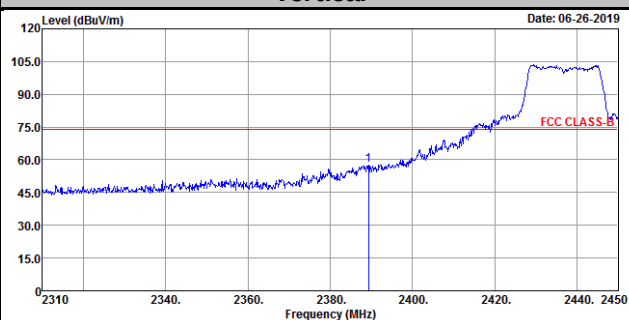
Ch 6

Peak

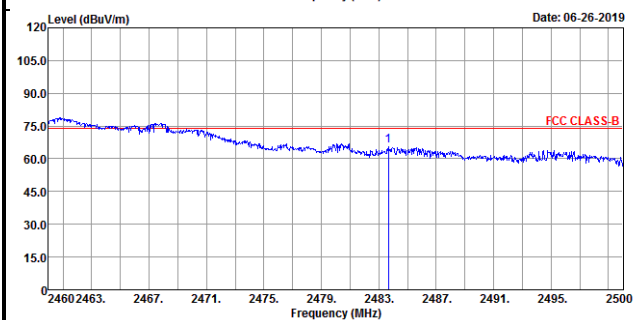
Horizontal



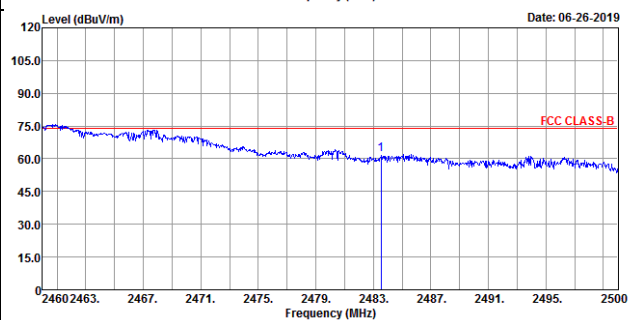
Vertical



Horizontal

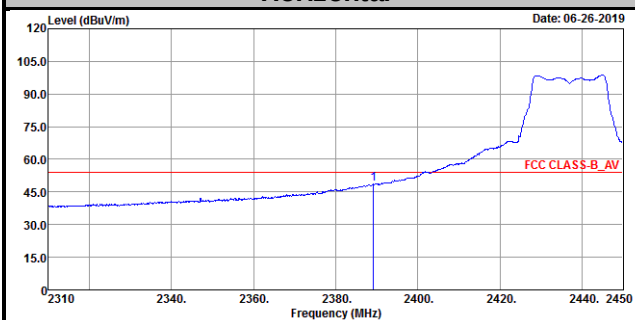


Vertical

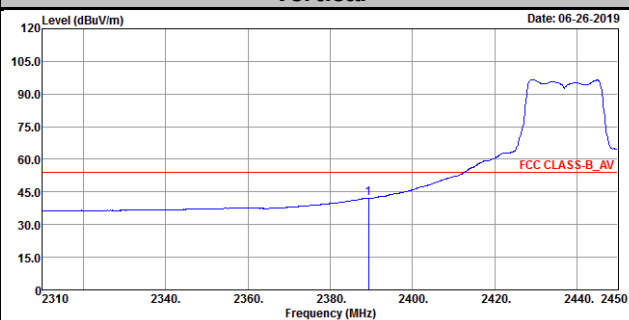


Average

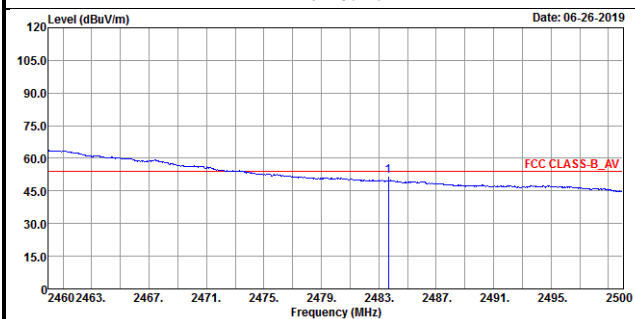
Horizontal



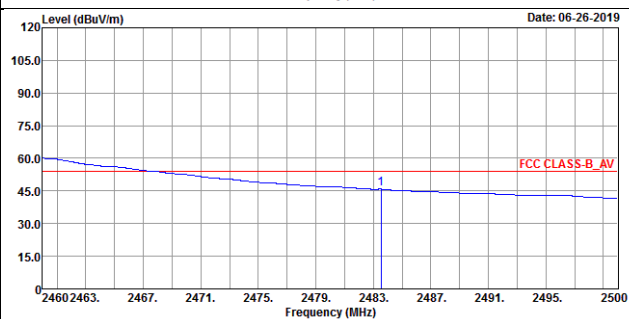
Vertical



Horizontal



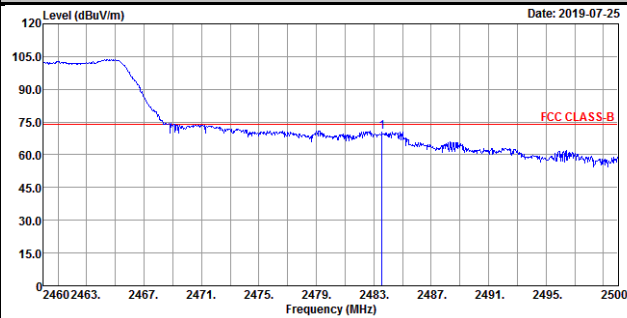
Vertical



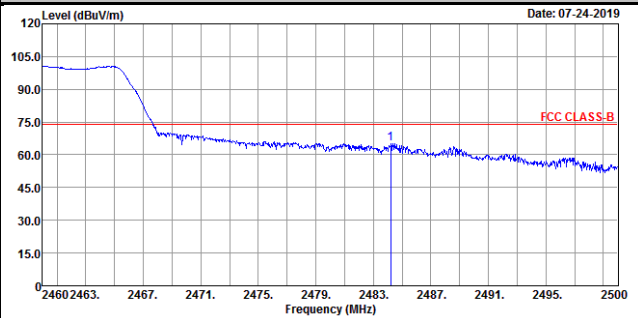
Ch 10

Peak

Horizontal

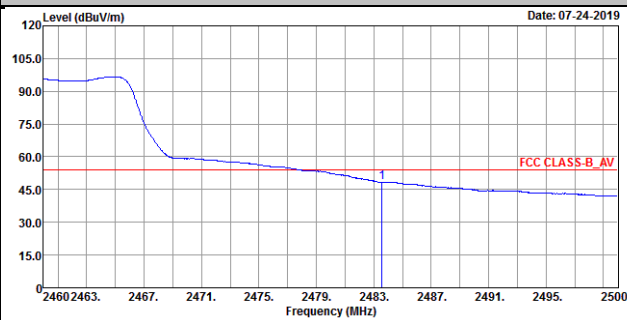


Vertical

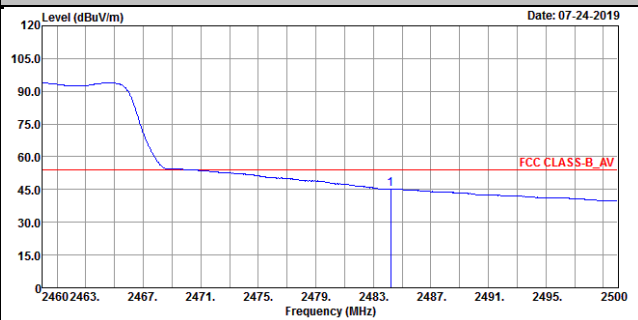


Average

Horizontal



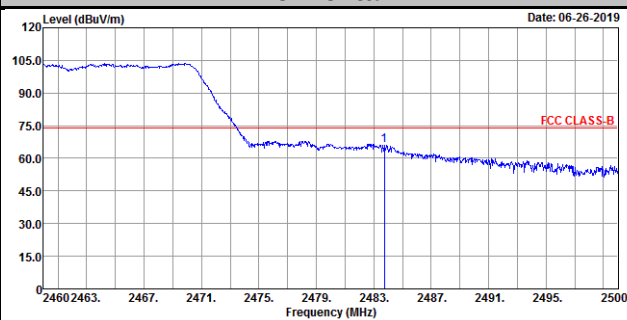
Vertical



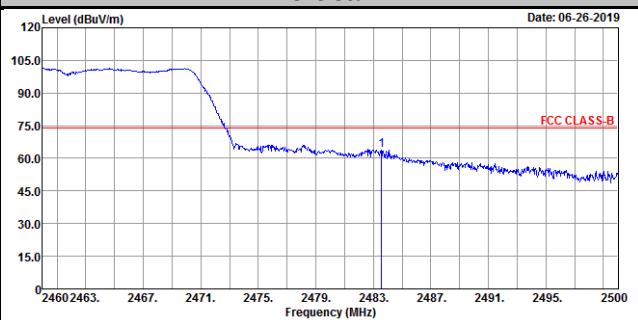
Ch 11

Peak

Horizontal

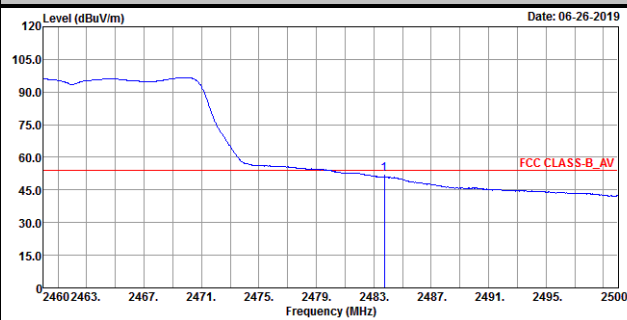


Vertical

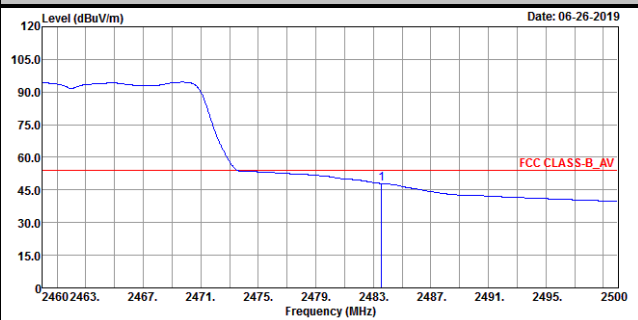


Average

Horizontal



Vertical

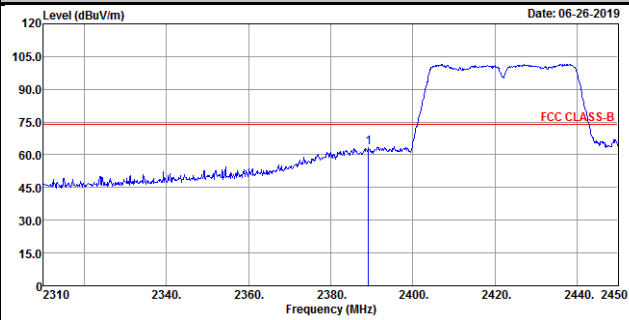


802.11n (HT40)

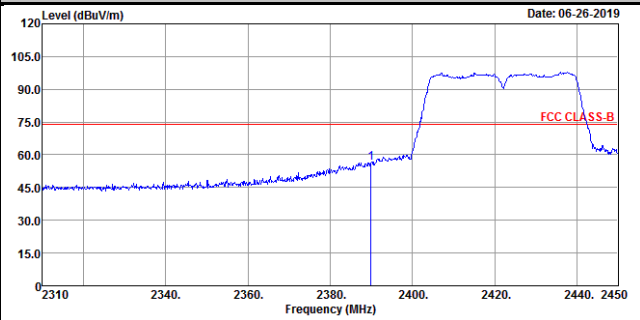
Ch 3

Peak

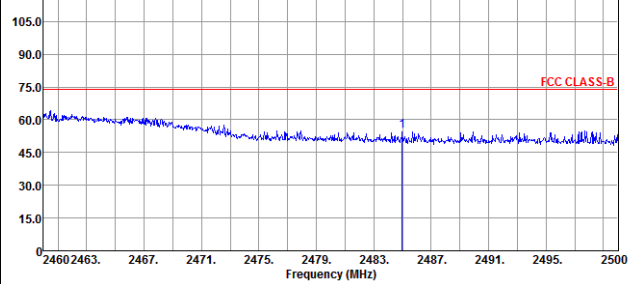
Horizontal



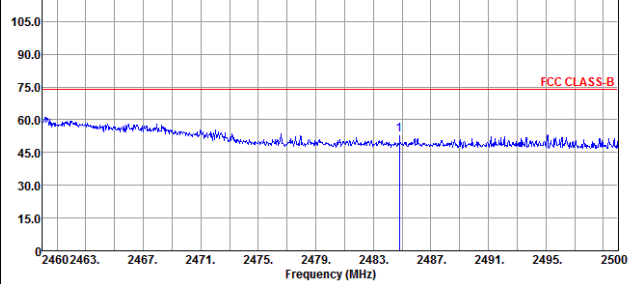
Vertical



Horizontal

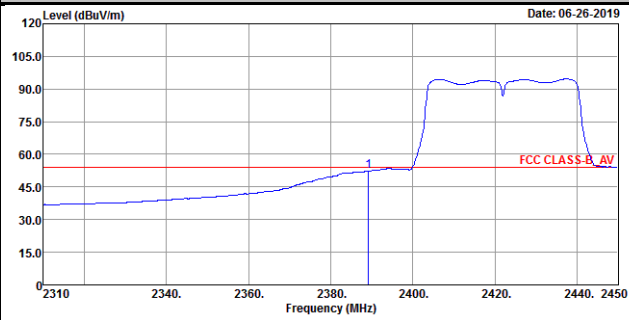


Vertical

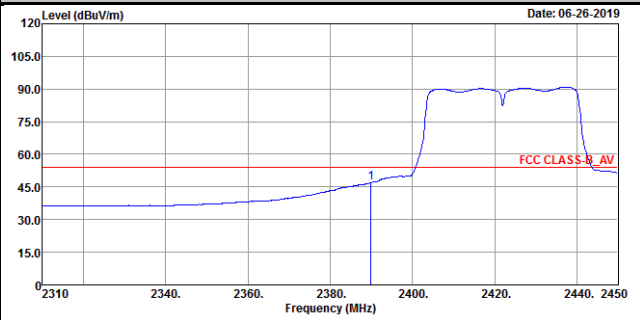


Average

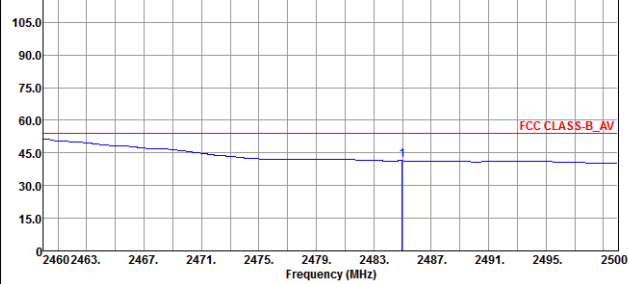
Horizontal



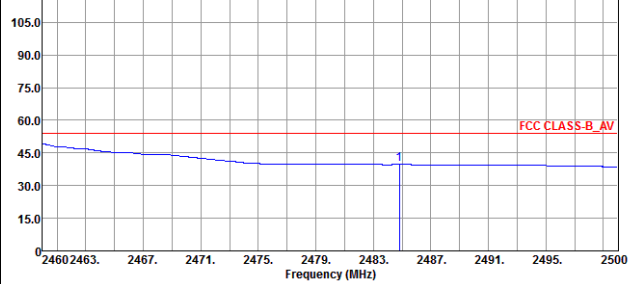
Vertical



Horizontal



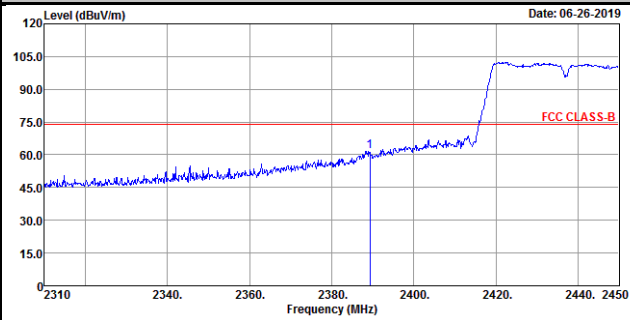
Vertical



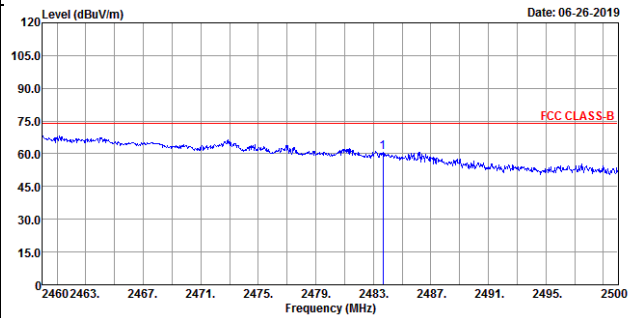
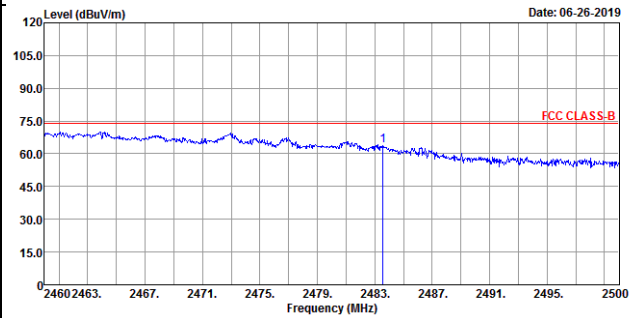
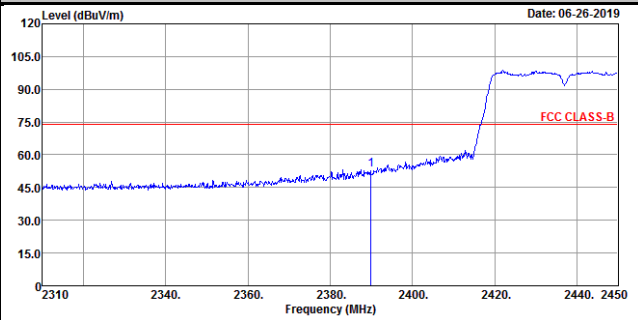
Ch 6

Peak

Horizontal

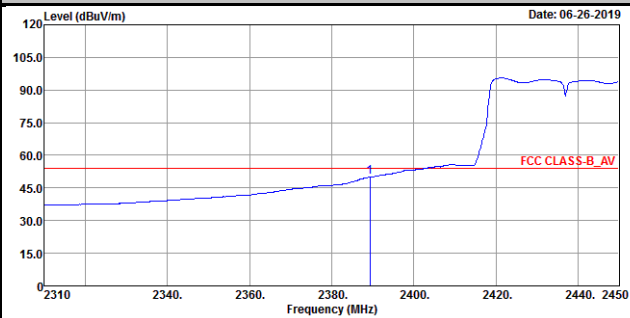


Vertical

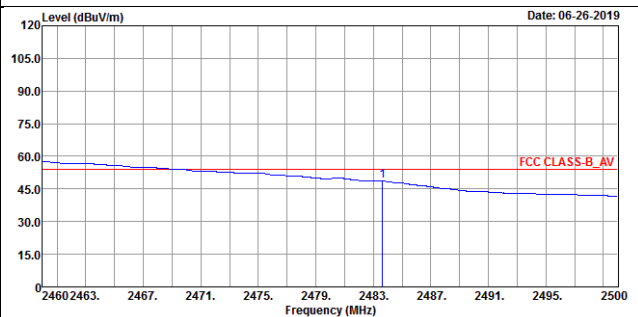
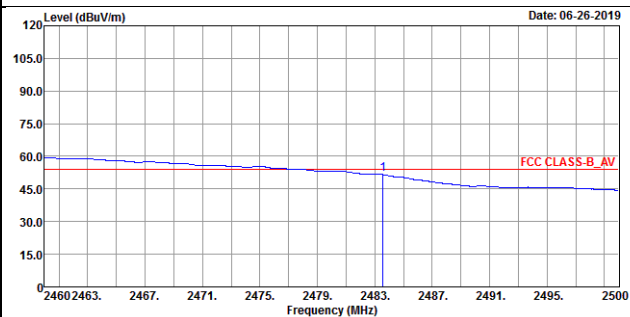
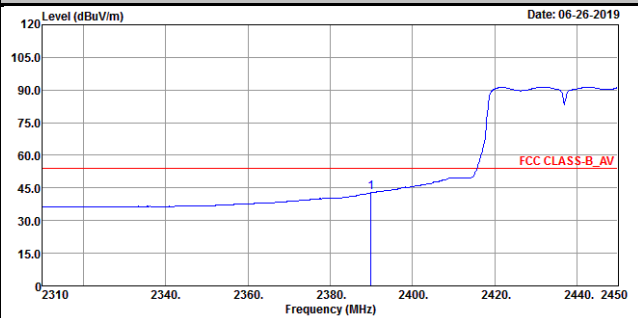


Average

Horizontal



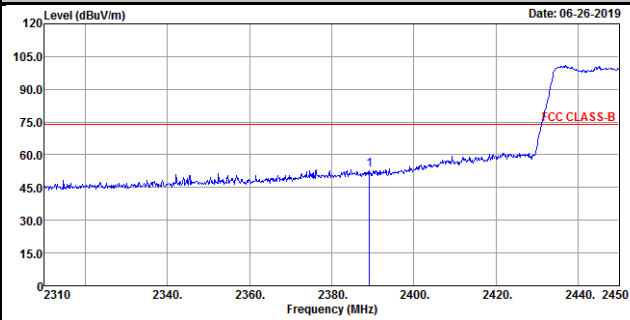
Vertical



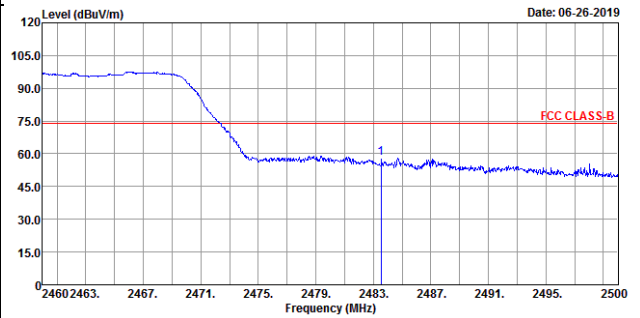
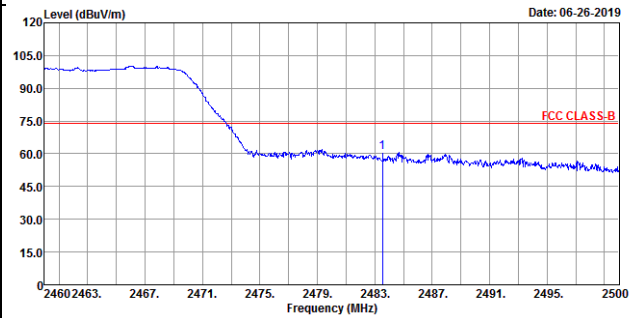
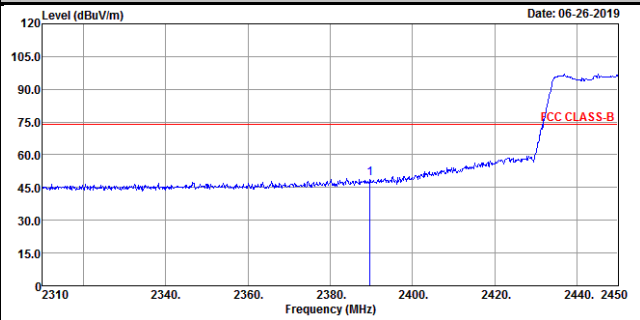
Ch 9

Peak

Horizontal

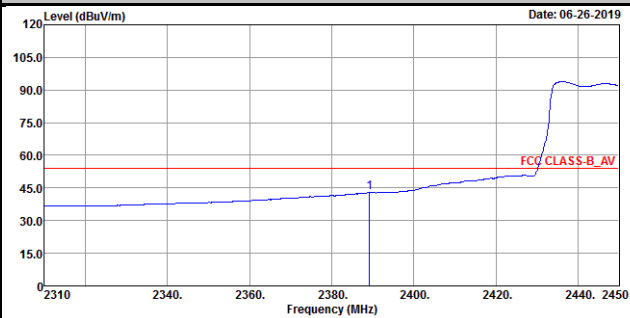


Vertical

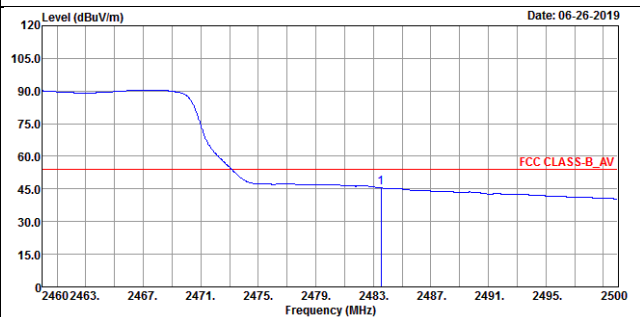
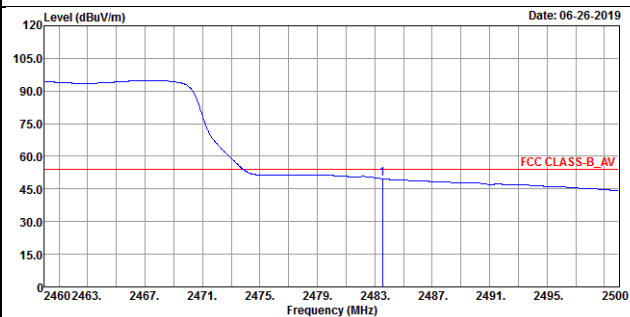
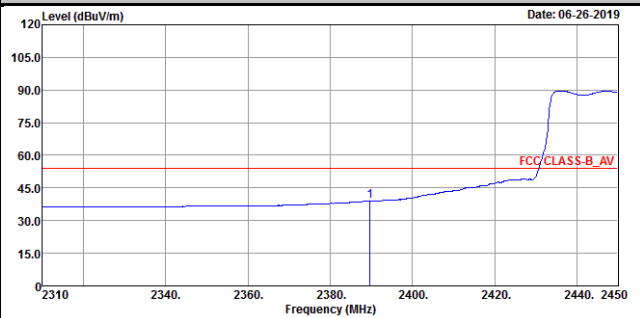


Average

Horizontal



Vertical



Appendix – Information of 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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

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

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