FCC Test Report

Report No.:	RF181217C36 R2
FCC ID:	A4RH2A
Model Name:	H2A
Received Date:	Dec. 17, 2018
Test Date:	Jan. 17, 2019 ~ Mar. 25, 2019
Issued Date:	Apr. 19, 2019
Applicant:	Google LLC
Address:	1600 Amphitheatre Parkway, Mountain View, CA 94043, USA
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:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan, R.O.C.
FCC Registration / Designation Number:	788550 / TW0003

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF181217C36	Original Release	Mar. 26, 2019
RF181217C36 R1	Added H/W, S/W	Apr. 11, 2019
RF181217C36 R2	Update test instrument date of calibration	Apr. 19, 2019

1 Certificate of Conformity

Product:	Interactive Video Streaming Device
Model Name:	H2A
Sample Status:	Engineering Sample
Applicant:	Google LLC
Test Date:	Jan. 17, 2019 ~ Mar. 25, 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 : Gina Liu , **Date:** Apr. 19, 2019

Gina Liu / Specialist

Approved by : , **Date:** Apr. 19, 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 -21.30 dB at 0.20625 MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.53 dB at 2483.80 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	Antenna connector is i-pex(MHF) not a standard connector.

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**	**Expended Uncertainty (k=2) (±)**
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 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 Video Streaming Device
Model Name	H2A
Status of EUT	Engineering Sample
Power Supply Rating	24.0 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 ~ 2472 MHz
Number of Channel	13 for 802.11b, 802.11g, 802.11n (HT20) 9 for 802.11n (HT40)
Output Power	97.724 mW
Antenna Type	PIFA antenna with 1.7 dBi gain
Antenna Connector	i-pex(MHF)
HW Version	EVT
SW Version	173539
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

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

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

2. The EUT's accessories list refers to Ext. Pho.
3. 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

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	13	2472
7	2442		

9 channels are provided for 802.11n (HT40):

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

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: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
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 13	1, 6, 11, 12, 13	DSSS	DBPSK	1.0
-	802.11g	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 11	3, 4, 5, 6, 7, 8, 9, 10, 11	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 (HT20)	1 to 13	11	OFDM	BPSK	6.5

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 (HT20)	1 to 13	11	OFDM	BPSK	6.5

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 13	1, 11, 12, 13	DSSS	DBPSK	1.0
-	802.11g	1 to 13	1, 11, 12, 13	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 13	1, 11, 12, 13	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 11	3, 9, 10, 11	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 13	1, 6, 11, 12, 13	DSSS	DBPSK	1.0
-	802.11g	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 13	1, 2, 3, 6, 9, 10, 11, 12, 13	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 11	3, 4, 5, 6, 7, 8, 9, 10, 11	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang, Thomas Wei
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
APCM	25 deg. C, 65 % RH	120 Vac, 60 Hz	Vincent Huang

3.3 Duty Cycle of Test Signal

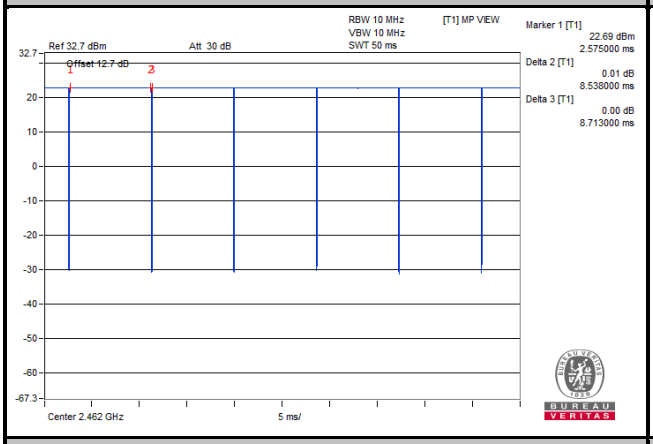
802.11b: Duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11g: Duty cycle = 1.427/1.529 = 0.933, Duty factor = 10 * log(1/0.933) = 0.30

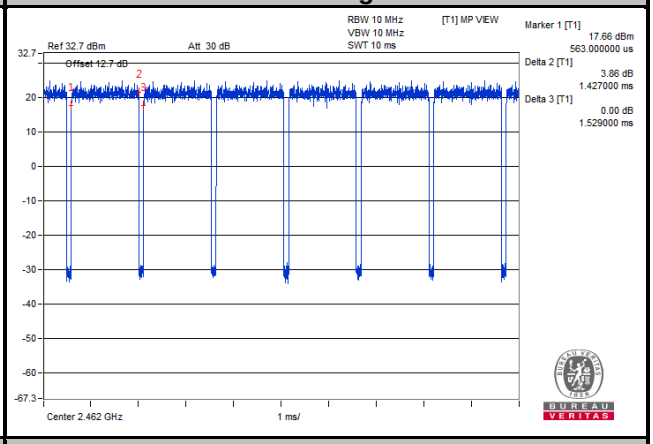
802.11n (HT20): Duty cycle = 1.329/1.444 = 0.920, Duty factor = 10 * log(1/0.920) = 0.36

802.11n (HT40): Duty cycle = 0.94/0.971 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

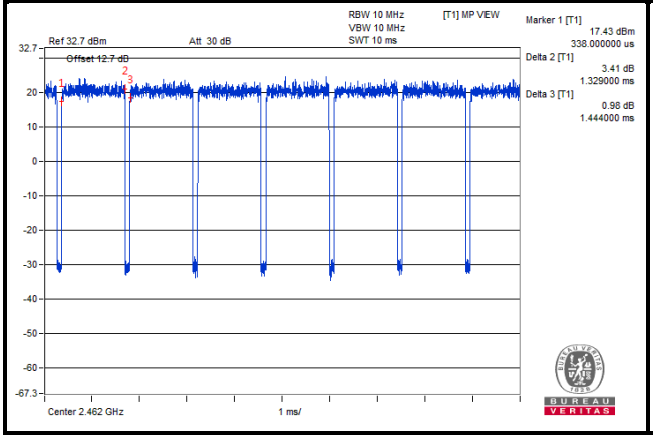
802.11b



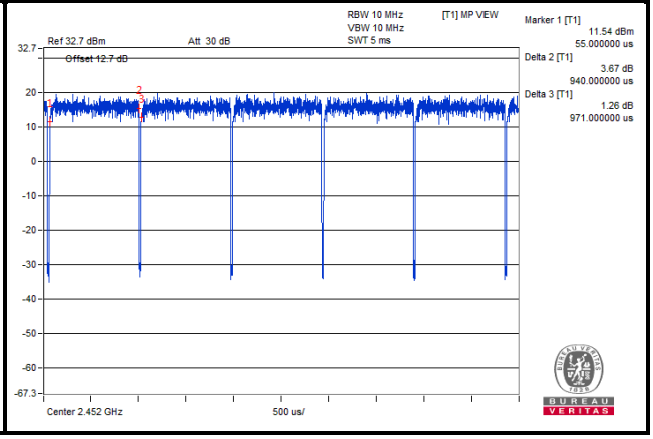
802.11g



802.11n (HT20)



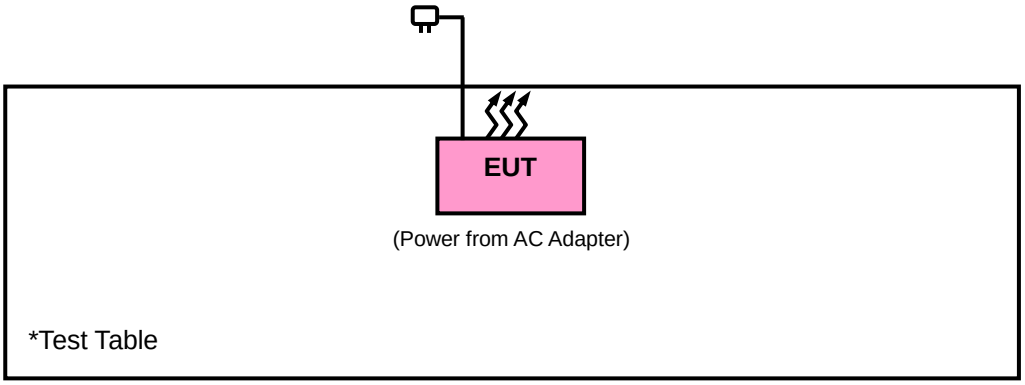
802.11n (HT40)



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 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	N9038A	MY51210203	Mar. 16, 2018	Mar. 15, 2019
			Mar. 18, 2019	Mar. 17, 2020
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 13, 2018	Dec. 12, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	100115	Jan. 21, 2019	Jan. 20, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 23, 2018	Nov. 22, 2019
Horn Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna	HLA 6121	45745	Jun. 14, 2018	May 18, 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
Preamplifier EMCI	EMC001340	980201	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-8000&3000	140811+170717	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	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 12, 2018	Oct. 11, 2019
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. The IC Site Registration No. is 7450F-10.

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:

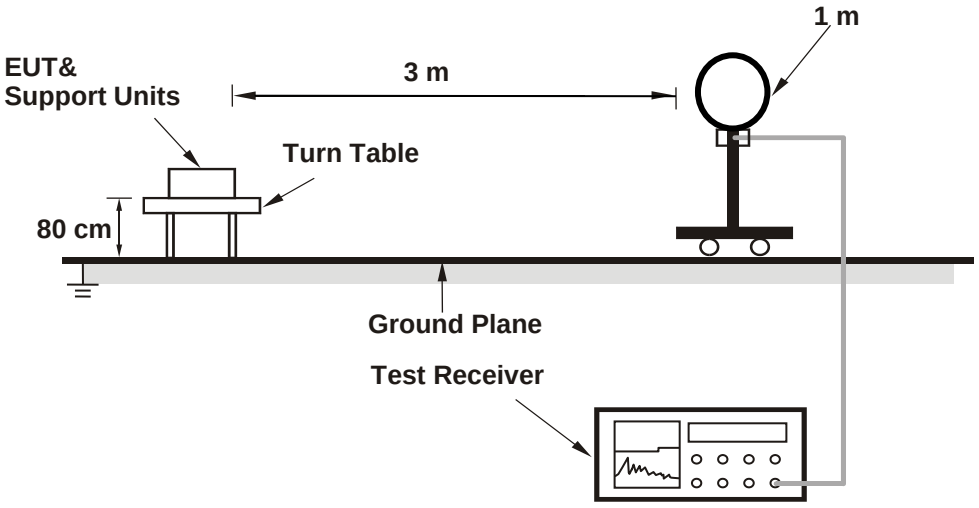
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 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 =300 Hz ; 11g: RBW = 1 MHz, VBW = 1 kHz ;
   11n (HT20): RBW = 1 MHz, VBW = 1 kHz ; 11n (HT40): RBW = 1 MHz, VBW = 1 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

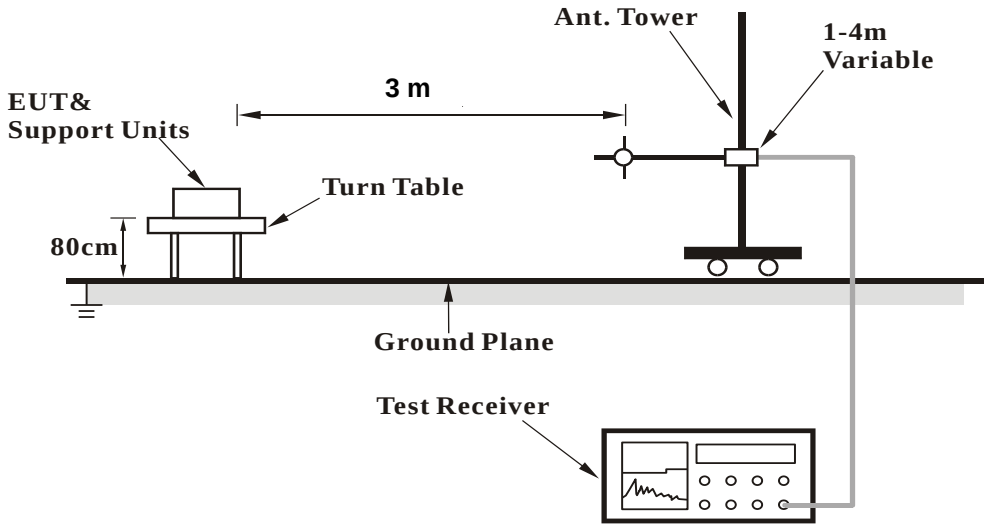
No deviation.

4.1.5 Test Set Up

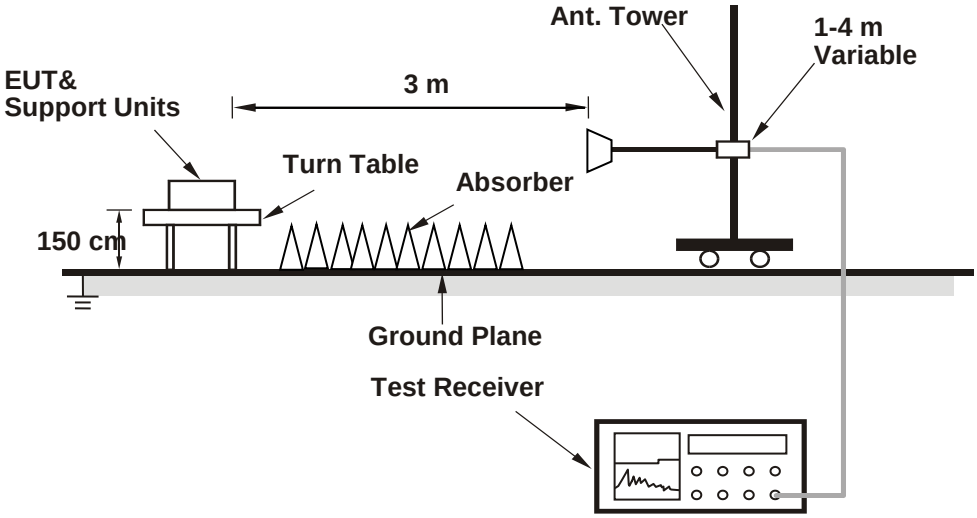
<Radiated Emission below 30 MHz>



<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

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

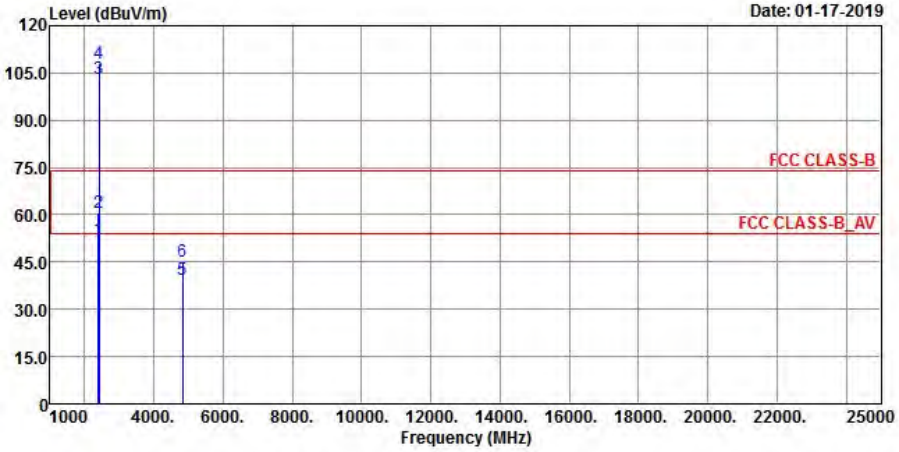
4.1.7 Test Results

Above 1 GHz Data：

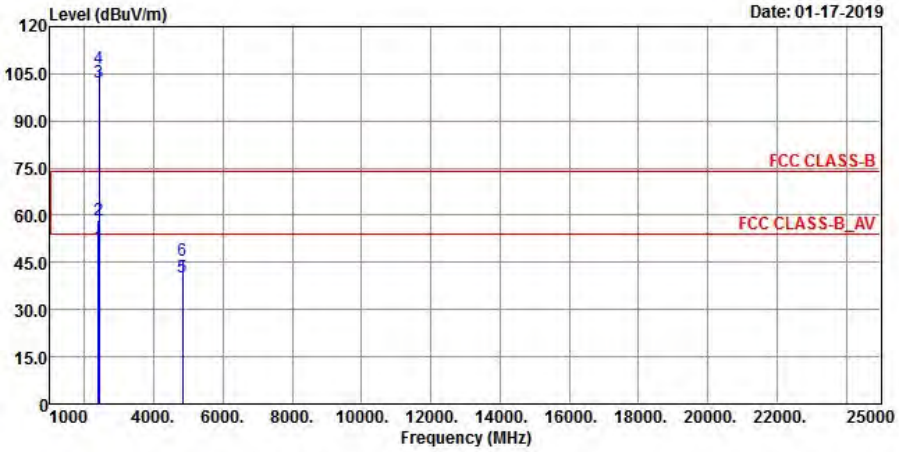
802.11b

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**	Jisyong Wang

Horizontal



Vertical



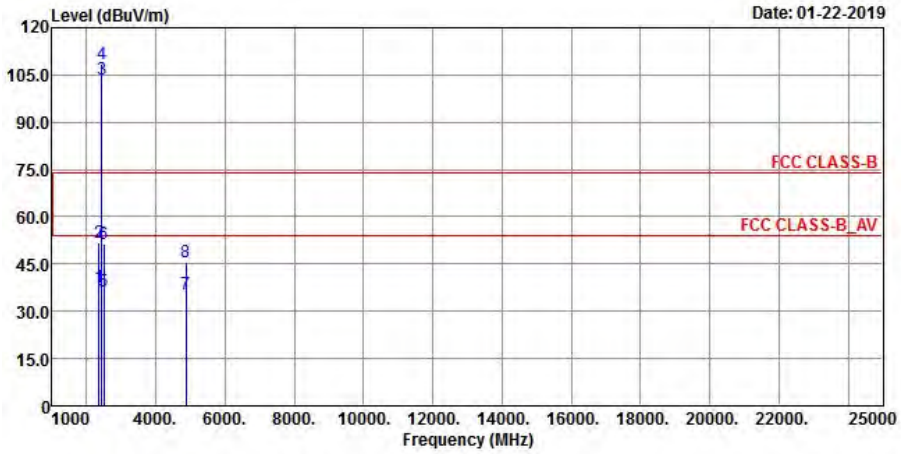
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	52.16	58.16	54	-1.84	27.16	4.36	37.52	110	357	Average
2389.94	60.48	66.48	74	-13.52	27.16	4.36	37.52	110	357	Peak
2412	103.07	108.98			27.23	4.38	37.52	110	357	Average
2412	108.07	113.98			27.23	4.38	37.52	110	357	Peak
4824	39.61	54.52	54	-14.39	31.17	6.81	52.89	185	256	Average
4824	44.98	59.89	74	-29.02	31.17	6.81	52.89	185	256	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
2389.94	50.17	56.17	54	-3.83	27.16	4.36	37.52	252	38	Average
2389.94	58.39	64.39	74	-15.61	27.16	4.36	37.52	252	38	Peak
2412	102.49	108.4			27.23	4.38	37.52	252	38	Average
2412	106.67	112.58			27.23	4.38	37.52	252	38	Peak
4824	40.14	55.05	54	-13.86	31.17	6.81	52.89	159	251	Average
4824	45.6	60.51	74	-28.4	31.17	6.81	52.89	159	251	Peak

Remarks:

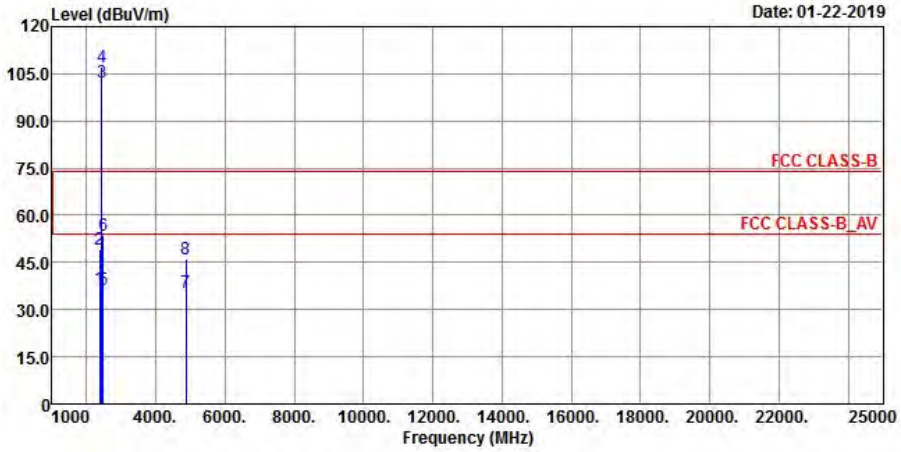
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



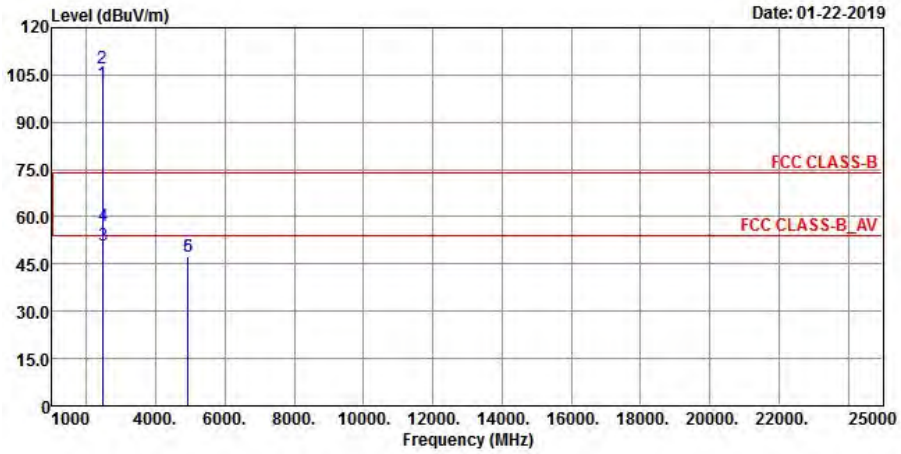
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2360.82	37.78	43.93	54	-16.22	27.01	4.33	37.49	124	357	Average
2360.82	51.98	58.13	74	-22.02	27.01	4.33	37.49	124	357	Peak
2437	103.74	109.42			27.38	4.4	37.46	124	357	Average
2437	108.52	114.2			27.38	4.4	37.46	124	357	Peak
2484.96	36.52	41.88	54	-17.48	27.53	4.43	37.32	124	357	Average
2484.96	51.21	56.57	74	-22.79	27.53	4.43	37.32	124	357	Peak
4874	35.42	50.17	54	-18.58	31.25	6.86	52.86	188	91	Average
4874	45.65	60.4	74	-28.35	31.25	6.86	52.86	188	91	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
2379.58	36.54	42.61	54	-17.46	27.08	4.35	37.5	231	41	Average
2379.58	49.24	55.31	74	-24.76	27.08	4.35	37.5	231	41	Peak
2437	102.3	107.98			27.38	4.4	37.46	231	41	Average
2437	107.16	112.84			27.38	4.4	37.46	231	41	Peak
2483.8	36.4	41.76	54	-17.6	27.53	4.43	37.32	231	41	Average
2483.8	53.66	59.02	74	-20.34	27.53	4.43	37.32	231	41	Peak
4874	35.43	50.18	54	-18.57	31.25	6.86	52.86	113	211	Average
4874	46.08	60.83	74	-27.92	31.25	6.86	52.86	113	211	Peak

Remarks:

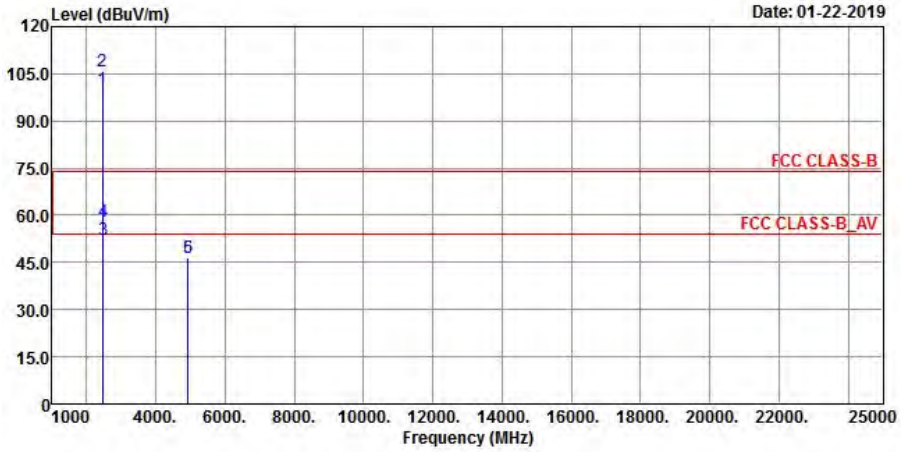
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



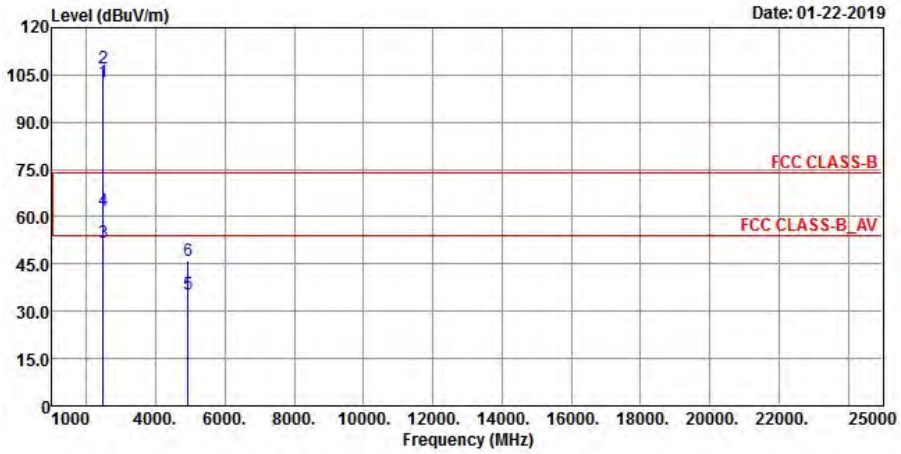
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	102.35	107.87			27.46	4.41	37.39	124	353	Average
2462	107.35	112.87			27.46	4.41	37.39	124	353	Peak
2483.52	51.03	56.39	54	-2.97	27.53	4.43	37.32	124	353	Average
2483.52	57.05	62.41	74	-16.95	27.53	4.43	37.32	124	353	Peak
4924	47.34	62	54	-6.66	31.34	6.89	52.89	178	103	Average
4924	47.34	62	74	-26.66	31.34	6.89	52.89	178	103	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
2462	100.12	105.64			27.46	4.41	37.39	249	38	Average
2462	105.66	111.18			27.46	4.41	37.39	249	38	Peak
2483.52	52.05	57.41	54	-1.95	27.53	4.43	37.32	249	38	Average
2483.52	57.88	63.24	74	-16.12	27.53	4.43	37.32	249	38	Peak
4924	46.43	61.09	54	-7.57	31.34	6.89	52.89	134	214	Average
4924	46.43	61.09	74	-27.57	31.34	6.89	52.89	134	214	Peak

Remarks:

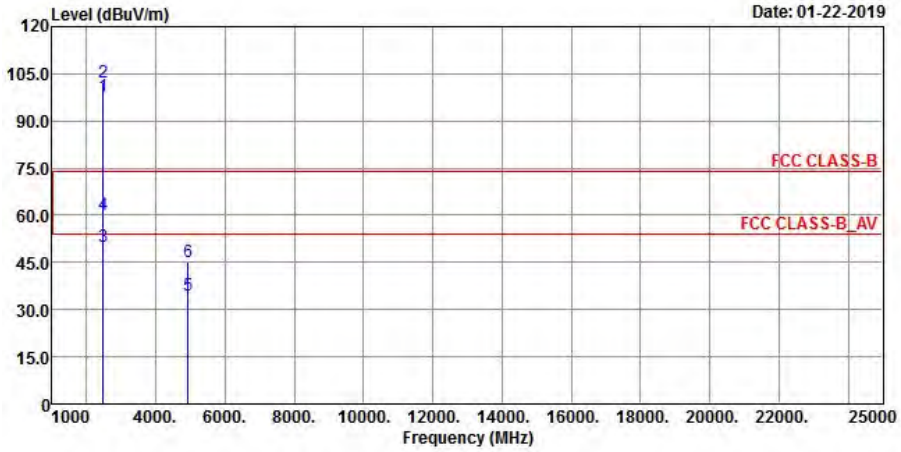
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 12	**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**	Jisyong Wang

Horizontal



Vertical



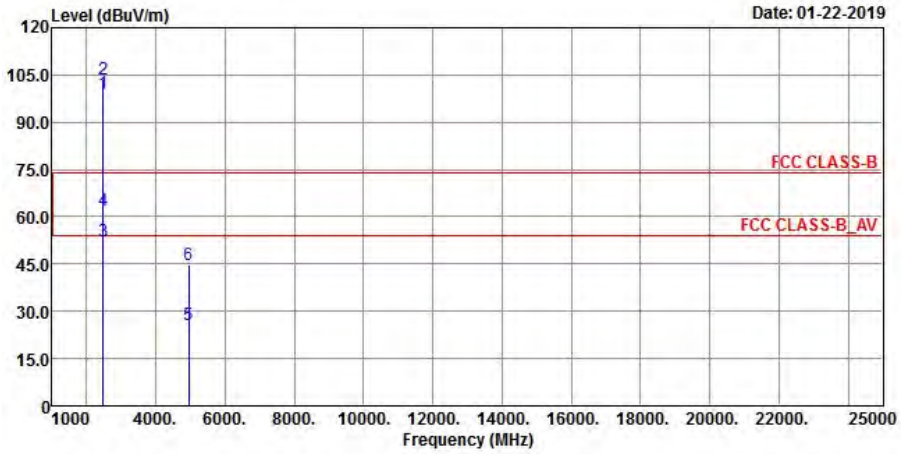
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2467	102.58	108.02			27.46	4.42	37.32	161	186	Average
2467	107.1	112.54			27.46	4.42	37.32	161	186	Peak
2483.52	51.87	57.23	54	-2.13	27.53	4.43	37.32	161	186	Average
2483.52	61.83	67.19	74	-12.17	27.53	4.43	37.32	161	186	Peak
4934	35.58	50.24	54	-18.42	31.34	6.89	52.89	182	76	Average
4934	46.19	60.85	74	-27.81	31.34	6.89	52.89	182	76	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
2467	97.98	103.42			27.46	4.42	37.32	250	31	Average
2467	102.49	107.93			27.46	4.42	37.32	250	31	Peak
2483.52	49.82	55.18	54	-4.18	27.53	4.43	37.32	250	31	Average
2483.52	60.38	65.74	74	-13.62	27.53	4.43	37.32	250	31	Peak
4934	34.57	49.23	54	-19.43	31.34	6.89	52.89	106	99	Average
4934	45.25	59.91	74	-28.75	31.34	6.89	52.89	106	99	Peak

Remarks:

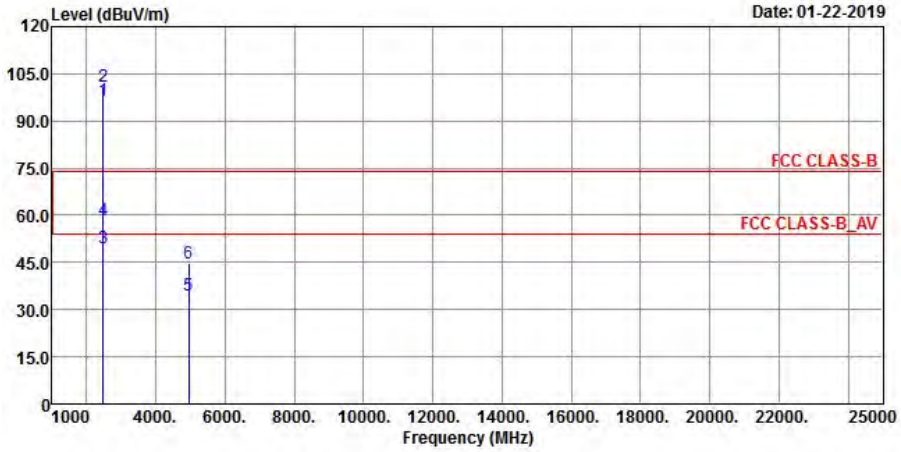
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2467 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 13	**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**	Jisyong Wang

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
2472	99.35	104.72			27.53	4.42	37.32	162	184	Average
2472	103.76	109.13			27.53	4.42	37.32	162	184	Peak
2483.52	52.36	57.72	54	-1.64	27.53	4.43	37.32	162	184	Average
2483.52	61.84	67.2	74	-12.16	27.53	4.43	37.32	162	184	Peak
4944	25.66	40.32	54	-28.34	31.37	6.89	52.92	182	93	Average
4944	44.78	59.44	74	-29.22	31.37	6.89	52.92	182	93	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
2472	96.39	101.76			27.53	4.42	37.32	250	31	Average
2472	100.94	106.31			27.53	4.42	37.32	250	31	Peak
2483.52	49.71	55.07	54	-4.29	27.53	4.43	37.32	250	31	Average
2483.52	58.39	63.75	74	-15.61	27.53	4.43	37.32	250	31	Peak
4944	34.42	49.08	54	-19.58	31.37	6.89	52.92	112	193	Average
4944	44.63	59.29	74	-29.37	31.37	6.89	52.92	112	193	Peak

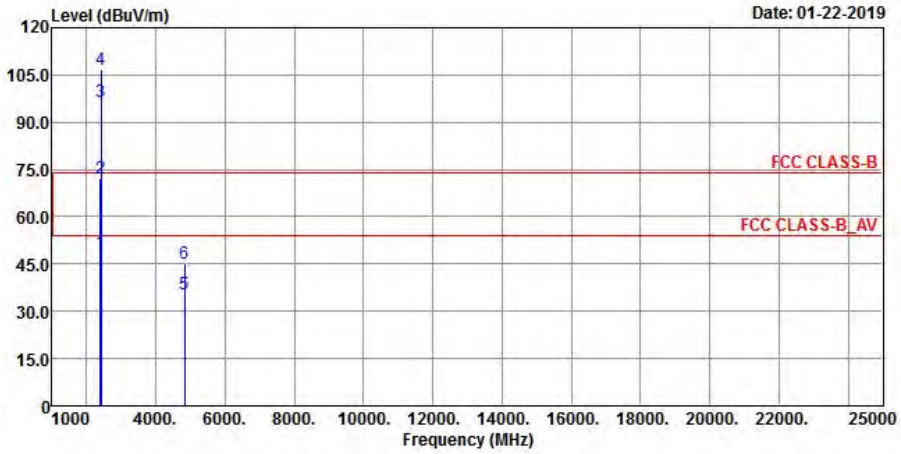
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2472 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

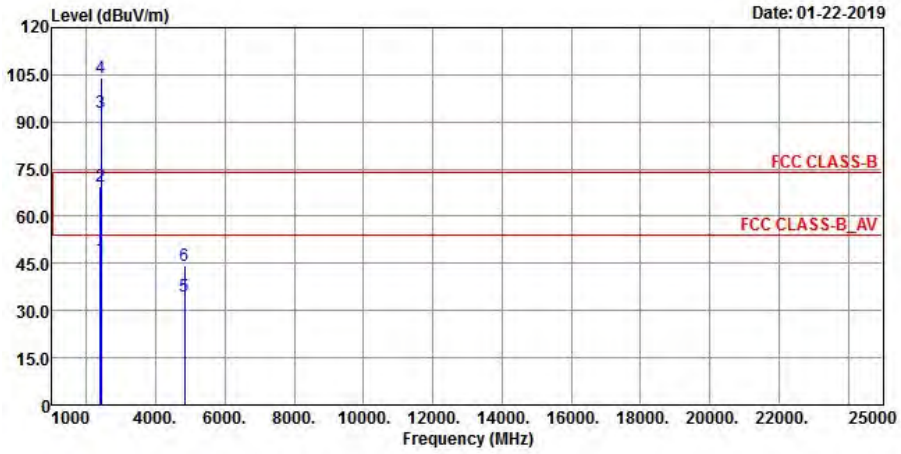
802.11g

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



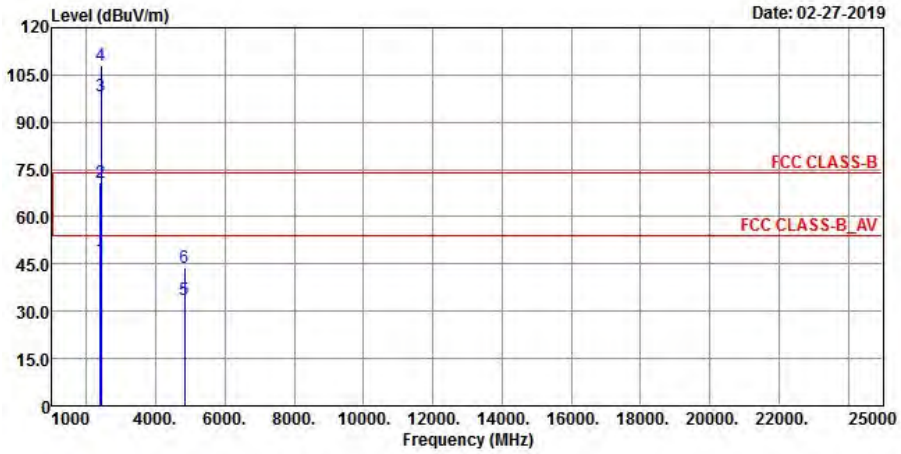
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	48.58	54.58	54	-5.42	27.16	4.36	37.52	158	355	Average
2389.94	72.13	78.13	74	-1.87	27.16	4.36	37.52	158	355	Peak
2412	96.41	102.32			27.23	4.38	37.52	158	355	Average
2412	106.72	112.63			27.23	4.38	37.52	158	355	Peak
4824	35.21	50.12	54	-18.79	31.17	6.81	52.89	106	311	Average
4824	45	59.91	74	-29	31.17	6.81	52.89	106	311	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
2389.94	46.65	52.65	54	-7.35	27.16	4.36	37.52	196	37	Average
2389.94	69.62	75.62	74	-4.38	27.16	4.36	37.52	196	37	Peak
2412	93.11	99.02			27.23	4.38	37.52	196	37	Average
2412	104.12	110.03			27.23	4.38	37.52	196	37	Peak
4824	34.41	49.32	54	-19.59	31.17	6.81	52.89	108	303	Average
4824	44.42	59.33	74	-29.58	31.17	6.81	52.89	108	303	Peak

Remarks:

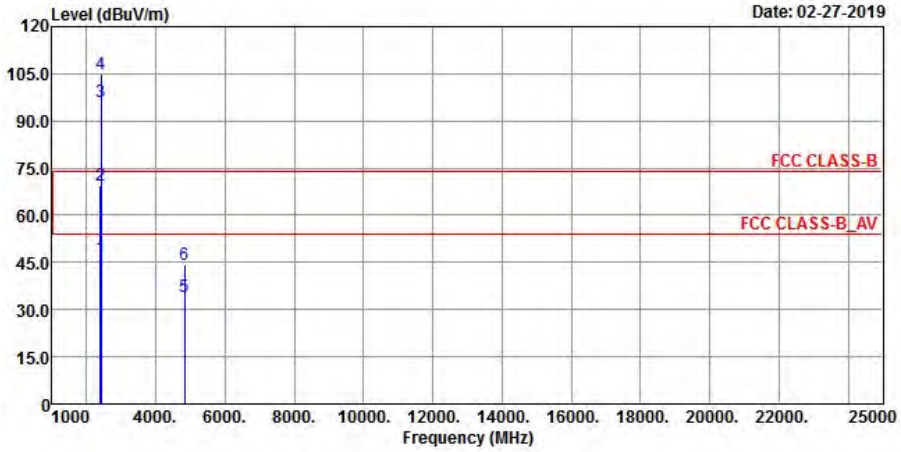
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



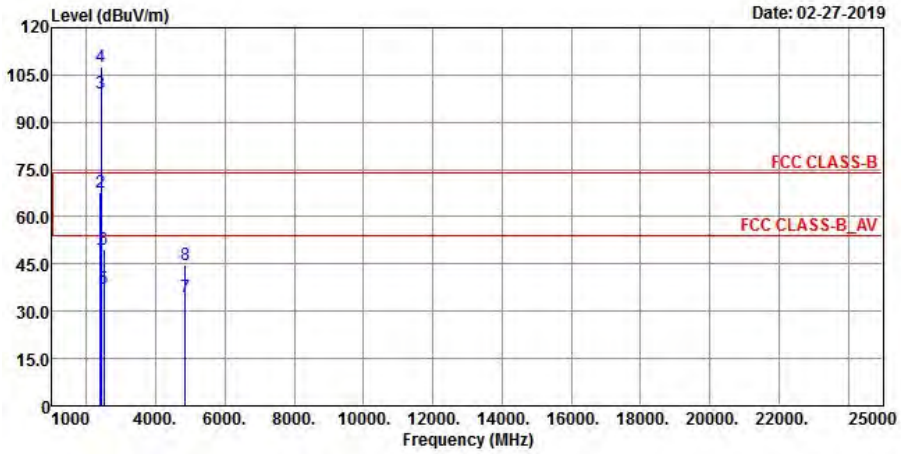
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	46.59	52.59	54	-7.41	27.16	4.36	37.52	141	1	Average
2389.94	70.79	76.79	74	-3.21	27.16	4.36	37.52	141	1	Peak
2417	98.51	104.36			27.23	4.38	37.46	141	1	Average
2417	107.97	113.82			27.23	4.38	37.46	141	1	Peak
4834	33.79	48.66	54	-20.21	31.2	6.82	52.89	126	237	Average
4834	44	58.87	74	-30	31.2	6.82	52.89	126	237	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
2389.77	46.28	52.28	54	-7.72	27.16	4.36	37.52	236	57	Average
2389.77	69.46	75.46	74	-4.54	27.16	4.36	37.52	236	57	Peak
2417	96.15	102			27.23	4.38	37.46	236	57	Average
2417	105.1	110.95			27.23	4.38	37.46	236	57	Peak
4834	34.26	49.13	54	-19.74	31.2	6.82	52.89	184	55	Average
4834	44.49	59.36	74	-29.51	31.2	6.82	52.89	184	55	Peak

Remarks:

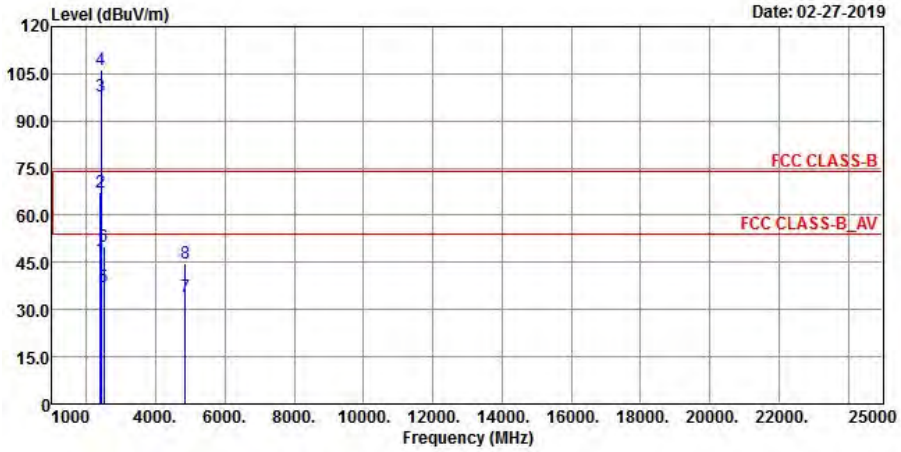
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2417 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 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**	Jisyong Wang

Horizontal



Vertical



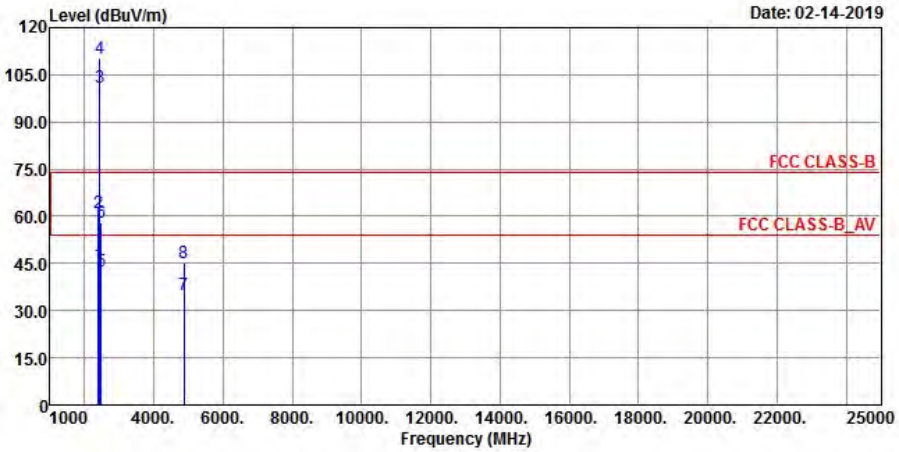
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.52	46.8	52.78	54	-7.2	27.16	4.36	37.5	140	2	Average
2389.52	67.75	73.73	74	-6.25	27.16	4.36	37.5	140	2	Peak
2422	99.12	104.88			27.31	4.39	37.46	140	2	Average
2422	107.79	113.55			27.31	4.39	37.46	140	2	Peak
2494.76	37.16	42.36	54	-16.84	27.61	4.44	37.25	140	2	Average
2494.76	49.67	54.87	74	-24.33	27.61	4.44	37.25	140	2	Peak
4844	34.51	49.36	54	-19.49	31.2	6.83	52.88	158	210	Average
4844	44.72	59.57	74	-29.28	31.2	6.83	52.88	158	210	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
2389.92	46.03	52.03	54	-7.97	27.16	4.36	37.52	231	63	Average
2389.92	67.23	73.23	74	-6.77	27.16	4.36	37.52	231	63	Peak
2422	97.81	103.57			27.31	4.39	37.46	231	63	Average
2422	106.44	112.2	74	32.44	27.31	4.39	37.46	231	63	Peak
2488.37	37.26	42.54	54	-16.74	27.61	4.43	37.32	231	63	Average
2488.37	50.05	55.33	74	-23.95	27.61	4.43	37.32	231	63	Peak
4844	33.91	48.76	54	-20.09	31.2	6.83	52.88	192	314	Average
4844	44.76	59.61	74	-29.24	31.2	6.83	52.88	192	314	Peak

Remarks:

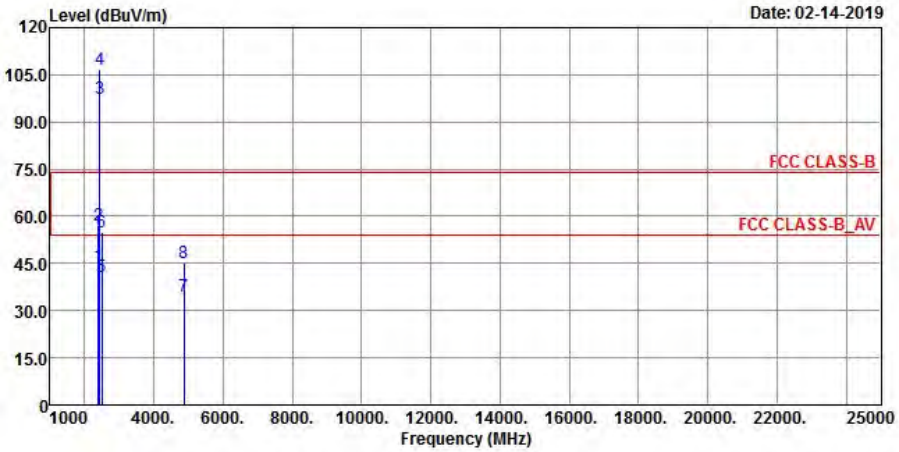
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2422 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



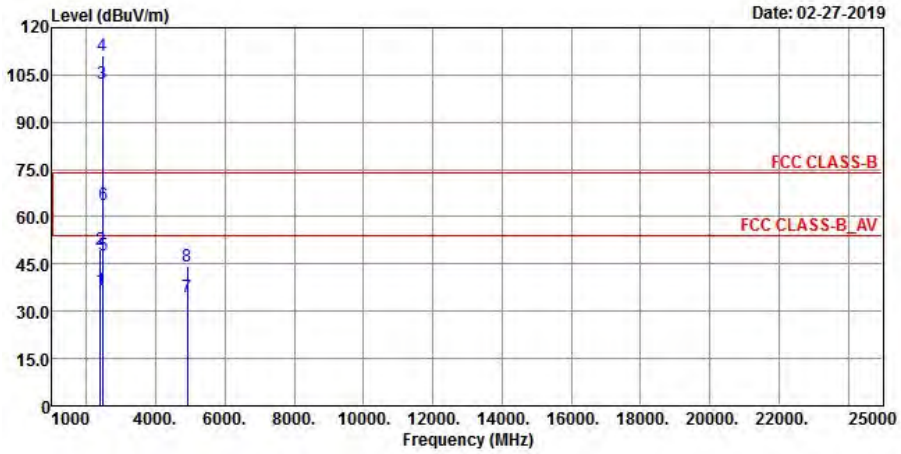
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.52	44.62	50.6	54	-9.38	27.16	4.36	37.5	209	181	Average
2389.52	61.23	67.21	74	-12.77	27.16	4.36	37.5	209	181	Peak
2437	100.88	106.56			27.38	4.4	37.46	209	181	Average
2437	110.27	115.95			27.38	4.4	37.46	209	181	Peak
2483.56	42.67	48.03	54	-11.33	27.53	4.43	37.32	209	181	Average
2483.56	57.84	63.2	74	-16.16	27.53	4.43	37.32	209	181	Peak
4874	34.88	49.63	54	-19.12	31.25	6.86	52.86	166	137	Average
4874	45.17	59.92	74	-28.83	31.25	6.86	52.86	166	137	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
2389.8	44.19	50.19	54	-9.81	27.16	4.36	37.52	100	342	Average
2389.8	57.17	63.17	74	-16.83	27.16	4.36	37.52	100	342	Peak
2437	97.41	103.09			27.38	4.4	37.46	100	342	Average
2437	106.51	112.19			27.38	4.4	37.46	100	342	Peak
2484.36	40.61	45.97	54	-13.39	27.53	4.43	37.32	100	342	Average
2484.36	54.98	60.34	74	-19.02	27.53	4.43	37.32	100	342	Peak
4874	34.38	49.13	54	-19.62	31.25	6.86	52.86	124	203	Average
4874	44.98	59.73	74	-29.02	31.25	6.86	52.86	124	203	Peak

Remarks:

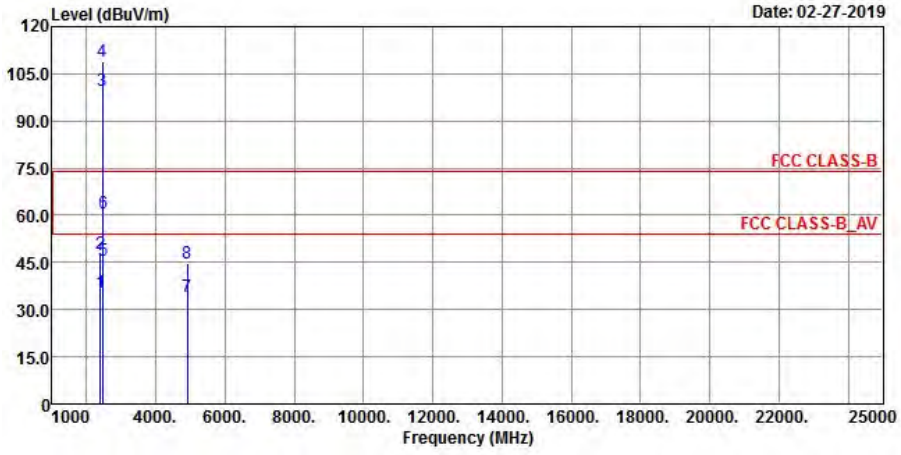
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



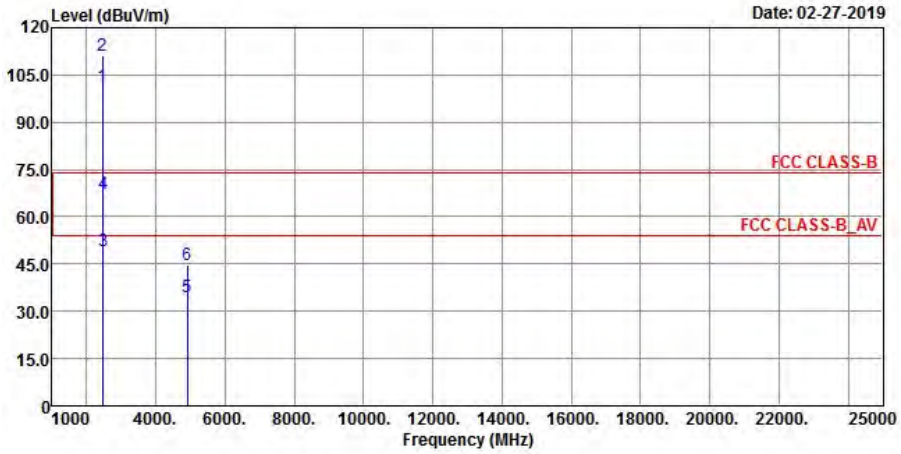
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.52	36.85	42.83	54	-17.15	27.16	4.36	37.5	161	188	Average
2389.52	49.54	55.52	74	-24.46	27.16	4.36	37.5	161	188	Peak
2452	102.19	107.79			27.38	4.41	37.39	161	188	Average
2452	111.22	116.82			27.38	4.41	37.39	161	188	Peak
2483.6	47.71	53.07	54	-6.29	27.53	4.43	37.32	161	188	Average
2483.6	63.57	68.93	74	-10.43	27.53	4.43	37.32	161	188	Peak
4904	34.36	49.02	54	-19.64	31.31	6.88	52.85	164	71	Average
4904	44.12	58.78	74	-29.88	31.31	6.88	52.85	164	71	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
2389.92	35.43	41.43	54	-18.57	27.16	4.36	37.52	105	29	Average
2389.92	48.02	54.02	74	-25.98	27.16	4.36	37.52	105	29	Peak
2452	99.62	105.22			27.38	4.41	37.39	105	29	Average
2452	108.92	114.52			27.38	4.41	37.39	105	29	Peak
2483.52	45.49	50.85	54	-8.51	27.53	4.43	37.32	105	29	Average
2483.52	60.77	66.13	74	-13.23	27.53	4.43	37.32	105	29	Peak
4905	33.93	48.59	54	-20.07	31.31	6.88	52.85	157	335	Average
4905	44.56	59.22	74	-29.44	31.31	6.88	52.85	157	335	Peak

Remarks:

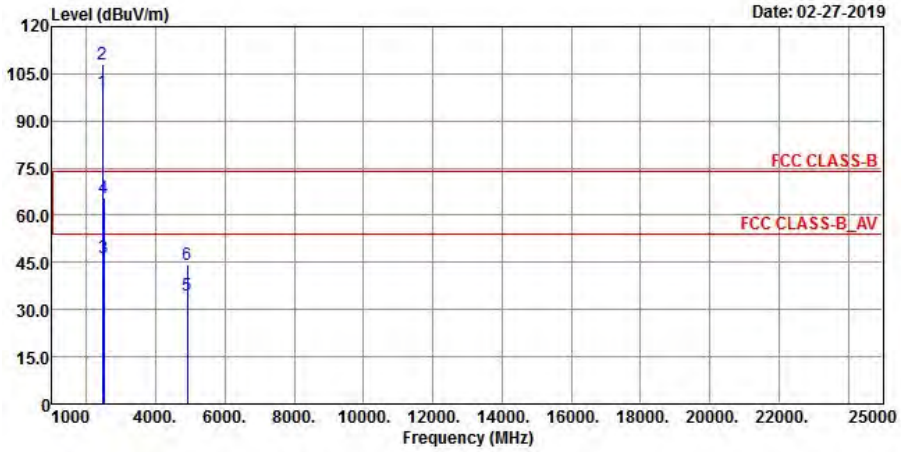
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2452 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



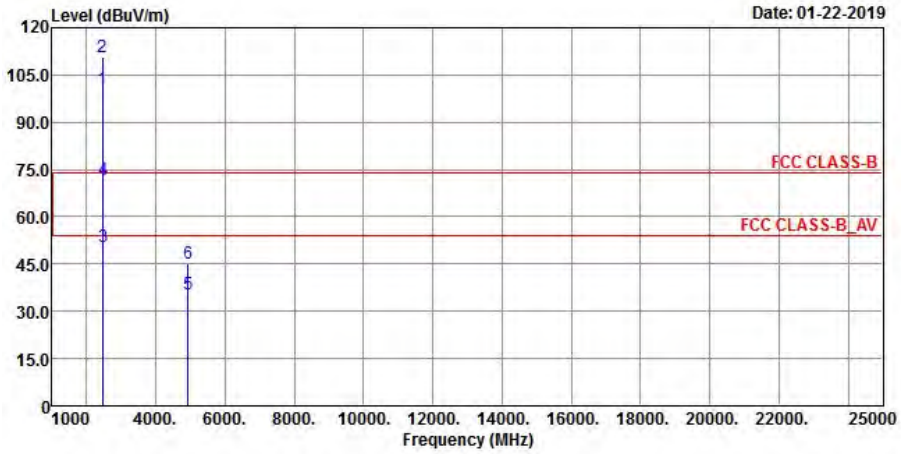
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	101.61	107.13			27.46	4.41	37.39	161	190	Average
2457	111.01	116.53			27.46	4.41	37.39	161	190	Peak
2483.56	48.95	54.31	54	-5.05	27.53	4.43	37.32	161	190	Average
2483.56	67.38	72.74	74	-6.62	27.53	4.43	37.32	161	190	Peak
4914	34.75	49.41	54	-19.25	31.31	6.88	52.85	169	246	Average
4914	44.82	59.48	74	-29.18	31.31	6.88	52.85	169	246	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
2457	99.06	104.58			27.46	4.41	37.39	108	24	Average
2457	107.83	113.35			27.46	4.41	37.39	108	24	Peak
2484.03	46.53	51.89	54	-7.47	27.53	4.43	37.32	108	24	Average
2484.03	65.61	70.97	74	-8.39	27.53	4.43	37.32	108	24	Peak
4914	34.61	49.27	54	-19.39	31.31	6.88	52.85	147	55	Average
4914	44.12	58.78	74	-29.88	31.31	6.88	52.85	147	55	Peak

Remarks:

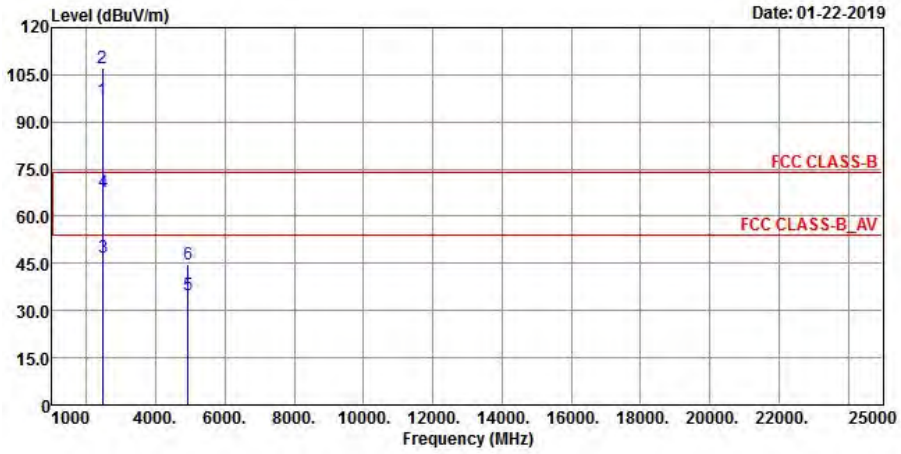
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2457 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



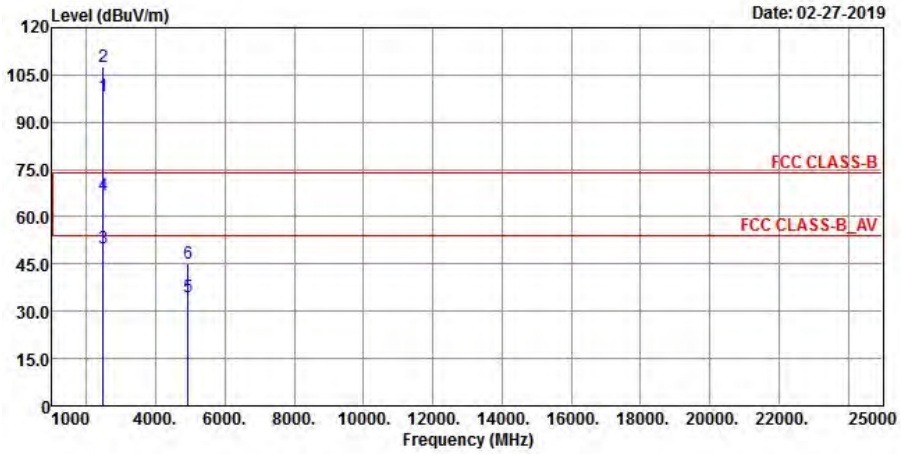
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	100.32	105.84			27.46	4.41	37.39	163	182	Average
2462	110.9	116.42			27.46	4.41	37.39	163	182	Peak
2483.52	50.6	55.96	54	-3.4	27.53	4.43	37.32	163	182	Average
2483.52	71.65	77.01	74	-2.35	27.53	4.43	37.32	163	182	Peak
4924	35.58	50.24	54	-18.42	31.34	6.89	52.89	164	53	Average
4924	45	59.66	74	-29	31.34	6.89	52.89	164	53	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
2462	96.77	102.29			27.46	4.41	37.39	222	34	Average
2462	107.13	112.65			27.46	4.41	37.39	222	34	Peak
2483.56	46.97	52.33	54	-7.03	27.53	4.43	37.32	222	34	Average
2483.56	67.84	73.2	74	-6.16	27.53	4.43	37.32	222	34	Peak
4924	34.77	49.43	54	-19.23	31.34	6.89	52.89	111	293	Average
4924	44.68	59.34	74	-29.32	31.34	6.89	52.89	111	293	Peak

Remarks:

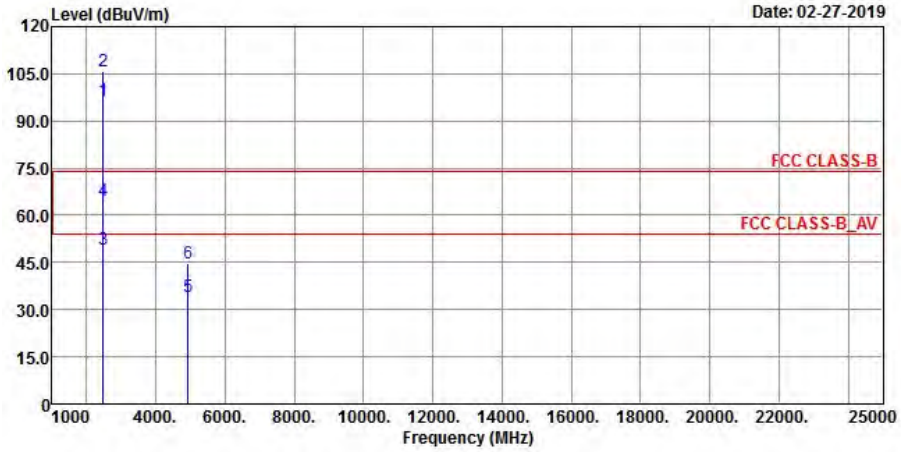
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 12	**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



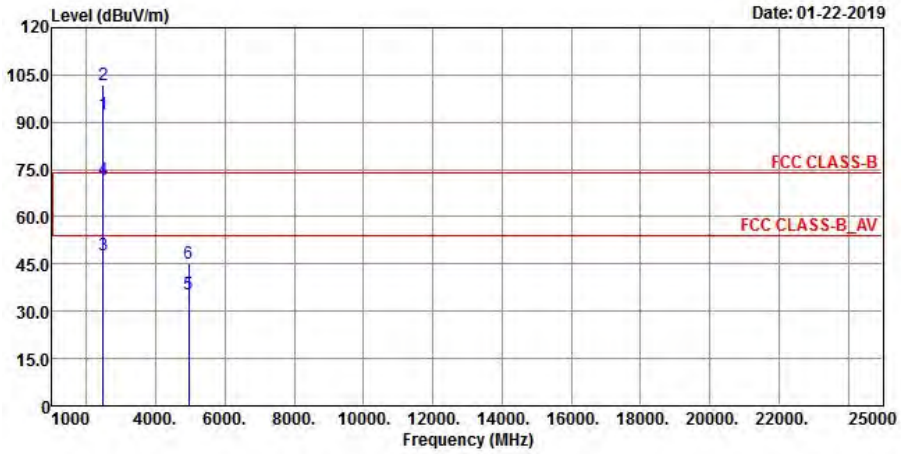
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2467	98.23	103.67			27.46	4.42	37.32	160	189	Average
2467	107.49	112.93			27.46	4.42	37.32	160	189	Peak
2483.52	50.2	55.56	54	-3.8	27.53	4.43	37.32	160	189	Average
2483.52	66.97	72.33	74	-7.03	27.53	4.43	37.32	160	189	Peak
4934	34.67	49.33	54	-19.33	31.34	6.89	52.89	167	266	Average
4934	44.96	59.62	74	-29.04	31.34	6.89	52.89	167	266	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
2467	96.31	101.75			27.46	4.42	37.32	105	21	Average
2467	105.65	111.09			27.46	4.42	37.32	105	21	Peak
2483.86	49.02	54.38	54	-4.98	27.53	4.43	37.32	105	21	Average
2483.86	64.78	70.14	74	-9.22	27.53	4.43	37.32	105	21	Peak
4934	34.3	48.96	54	-19.7	31.34	6.89	52.89	183	199	Average
4934	44.76	59.42	74	-29.24	31.34	6.89	52.89	183	199	Peak

Remarks:

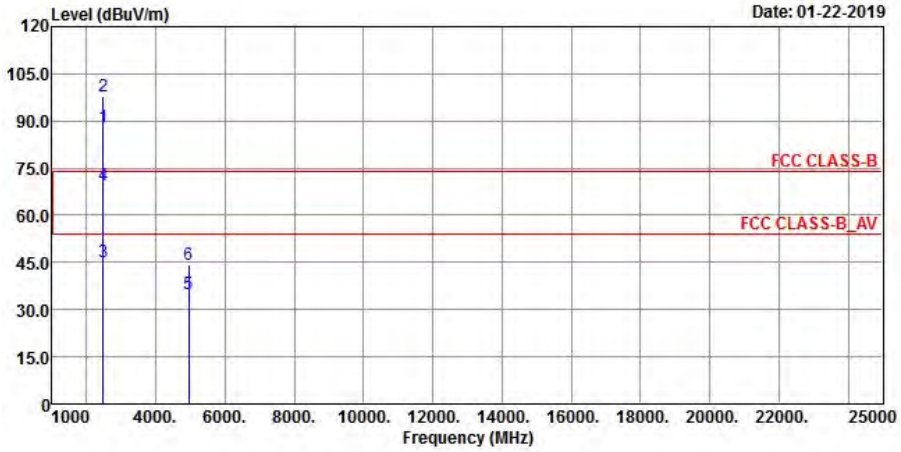
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2467 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 13	**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



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
2472	92.6	97.97			27.53	4.42	37.32	196	180	Average
2472	101.92	107.29			27.53	4.42	37.32	196	180	Peak
2483.5	47.64	53	54	-6.36	27.53	4.43	37.32	196	180	Average
2483.5	71.91	77.27	74	-2.09	27.53	4.43	37.32	196	180	Peak
4944	35.46	50.12	54	-18.54	31.37	6.89	52.92	153	227	Average
4944	44.95	59.61	74	-29.05	31.37	6.89	52.92	153	227	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
2472	87.99	93.36			27.53	4.42	37.32	100	36	Average
2472	97.8	103.17			27.53	4.42	37.32	100	36	Peak
2483.5	45.09	50.45	54	-8.91	27.53	4.43	37.32	100	36	Average
2483.5	69.45	74.81	74	-4.55	27.53	4.43	37.32	100	36	Peak
4944	34.77	49.43	54	-19.23	31.37	6.89	52.92	162	88	Average
4944	44.46	59.12	74	-29.54	31.37	6.89	52.92	162	88	Peak

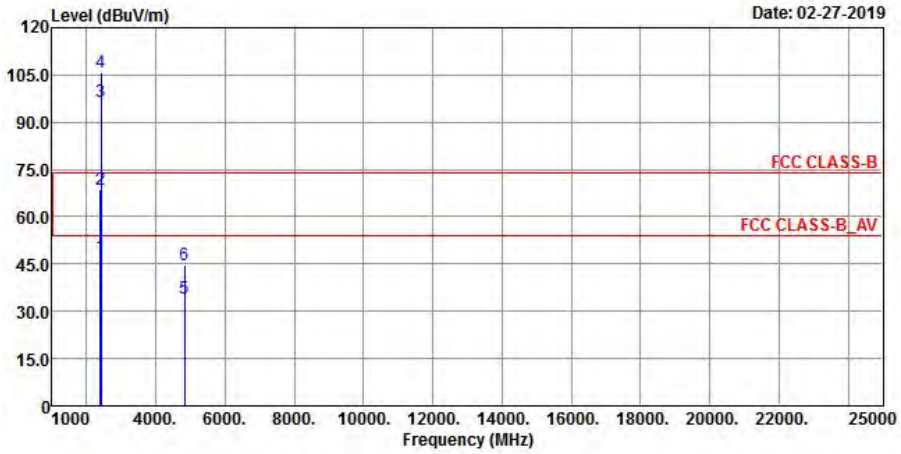
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2472 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

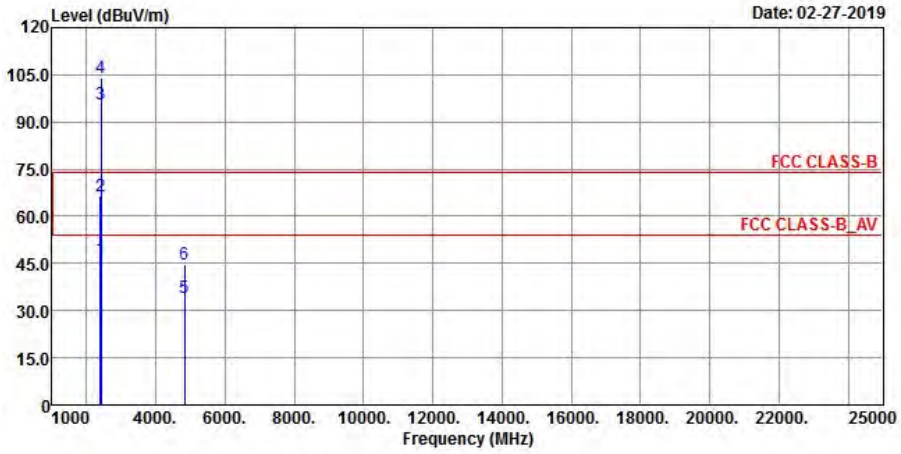
802.11n (HT20)

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**	Jisyong Wang

Horizontal



Vertical



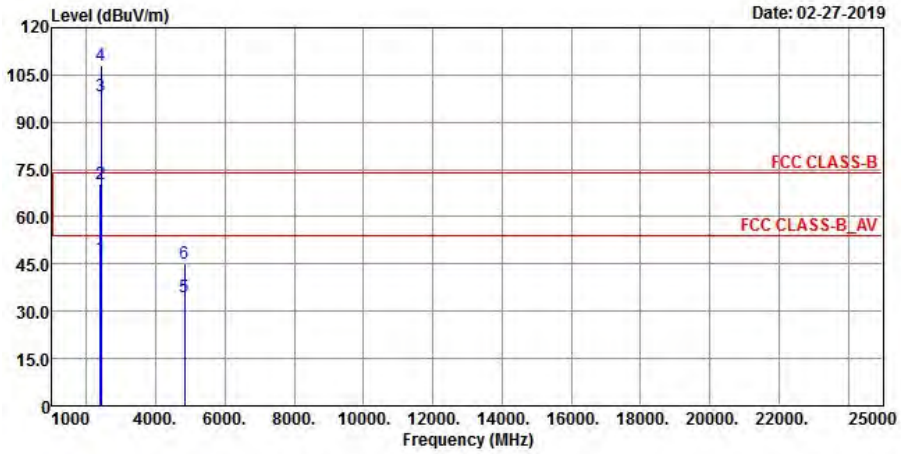
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	47.2	53.2	54	-6.8	27.16	4.36	37.52	138	1	Average
2389.94	68.57	74.57	74	-5.43	27.16	4.36	37.52	138	1	Peak
2412	96.37	102.28			27.23	4.38	37.52	138	1	Average
2412	105.66	111.57			27.23	4.38	37.52	138	1	Peak
4824	34.18	49.09	54	-19.82	31.17	6.81	52.89	130	182	Average
4824	44.74	59.65	74	-29.26	31.17	6.81	52.89	130	182	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
2389.81	46.55	52.55	54	-7.45	27.16	4.36	37.52	232	51	Average
2389.81	66.48	72.48	74	-7.52	27.16	4.36	37.52	232	51	Peak
2412	95.51	101.42			27.23	4.38	37.52	232	51	Average
2412	104.03	109.94			27.23	4.38	37.52	232	51	Peak
4824	34.27	49.18	54	-19.73	31.17	6.81	52.89	144	255	Average
4824	44.81	59.72	74	-29.19	31.17	6.81	52.89	144	255	Peak

Remarks:

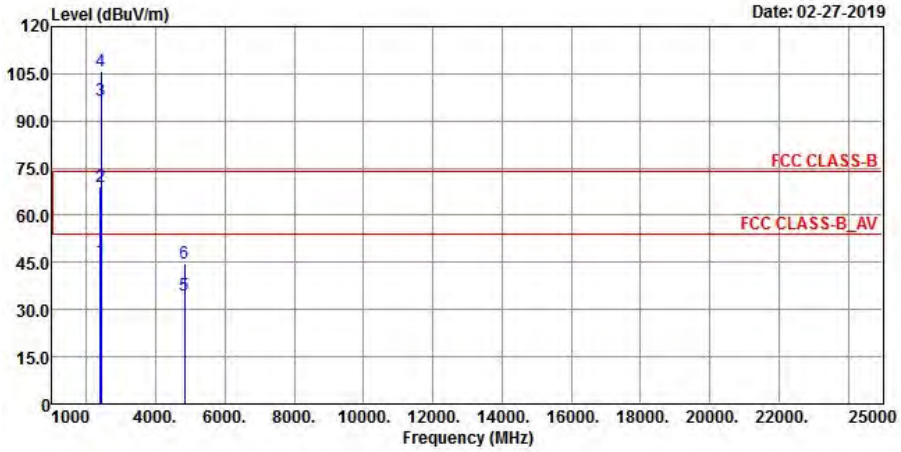
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2412 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



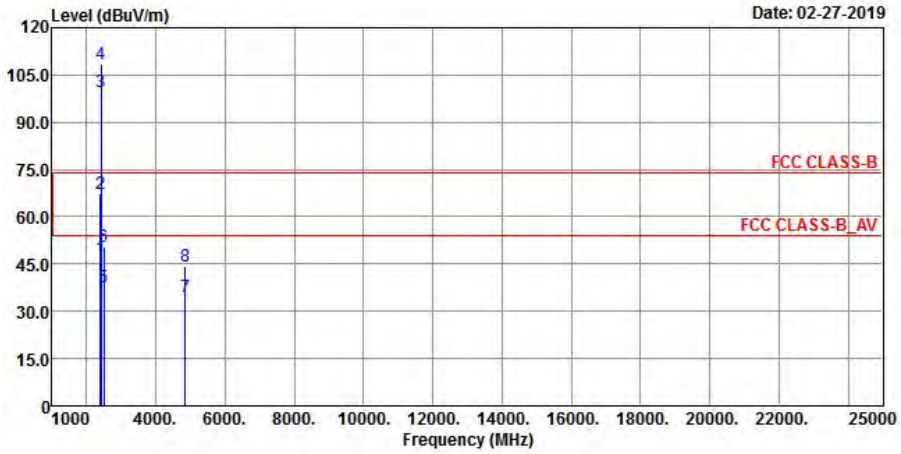
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	47.08	53.08	54	-6.92	27.16	4.36	37.52	169	0	Average
2389.94	70.42	76.42	74	-3.58	27.16	4.36	37.52	169	0	Peak
2417	98.48	104.33			27.23	4.38	37.46	169	0	Average
2417	108.07	113.92			27.23	4.38	37.46	169	0	Peak
4834	34.35	49.22	54	-19.65	31.2	6.82	52.89	140	170	Average
4834	45.09	59.96	74	-28.91	31.2	6.82	52.89	140	170	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
2389.94	45.82	51.82	54	-8.18	27.16	4.36	37.52	182	68	Average
2389.94	69.11	75.11	74	-4.89	27.16	4.36	37.52	182	68	Peak
2417	96.51	102.36			27.23	4.38	37.46	182	68	Average
2417	105.67	111.52			27.23	4.38	37.46	182	68	Peak
4834	34.5	49.37	54	-19.5	31.2	6.82	52.89	195	78	Average
4834	44.66	59.53	74	-29.34	31.2	6.82	52.89	195	78	Peak

Remarks:

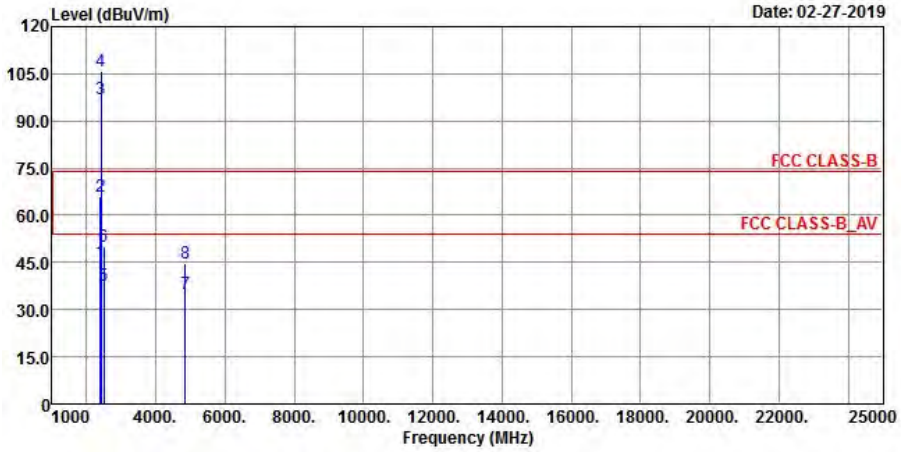
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2417 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 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**	Jisyong Wang

Horizontal



Vertical



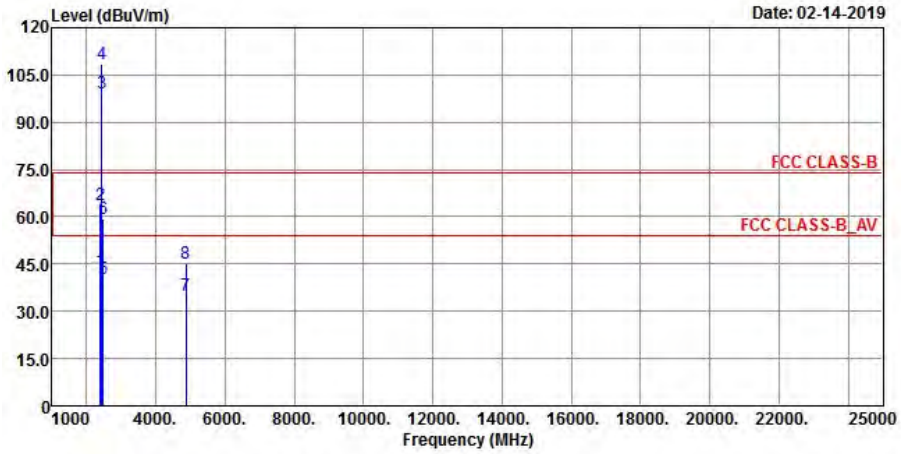
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	46.8	52.8	54	-7.2	27.16	4.36	37.52	141	0	Average
2389.94	67.32	73.32	74	-6.68	27.16	4.36	37.52	141	0	Peak
2422	99.73	105.49			27.31	4.39	37.46	141	0	Average
2422	108.65	114.41			27.31	4.39	37.46	141	0	Peak
2495.88	37.5	42.7	54	-16.5	27.61	4.44	37.25	141	0	Average
2495.88	50.4	55.6	74	-23.6	27.61	4.44	37.25	141	0	Peak
4844	34.32	49.17	54	-19.68	31.2	6.83	52.88	175	236	Average
4844	44.23	59.08	74	-29.77	31.2	6.83	52.88	175	236	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
2388.79	45.37	51.35	54	-8.63	27.16	4.36	37.5	240	71	Average
2388.79	65.96	71.94	74	-8.04	27.16	4.36	37.5	240	71	Peak
2422	97.03	102.79			27.31	4.39	37.46	240	71	Average
2422	105.89	111.65			27.31	4.39	37.46	240	71	Peak
2488.18	37.62	42.9	54	-16.38	27.61	4.43	37.32	240	71	Average
2488.18	50.24	55.52	74	-23.76	27.61	4.43	37.32	240	71	Peak
4844	34.78	49.63	54	-19.22	31.2	6.83	52.88	153	200	Average
4844	44.64	59.49	74	-29.36	31.2	6.83	52.88	153	200	Peak

Remarks:

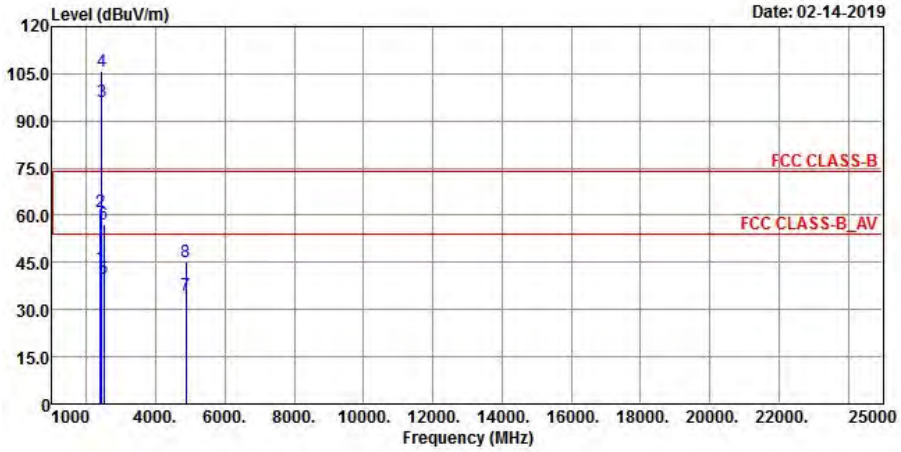
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2422 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



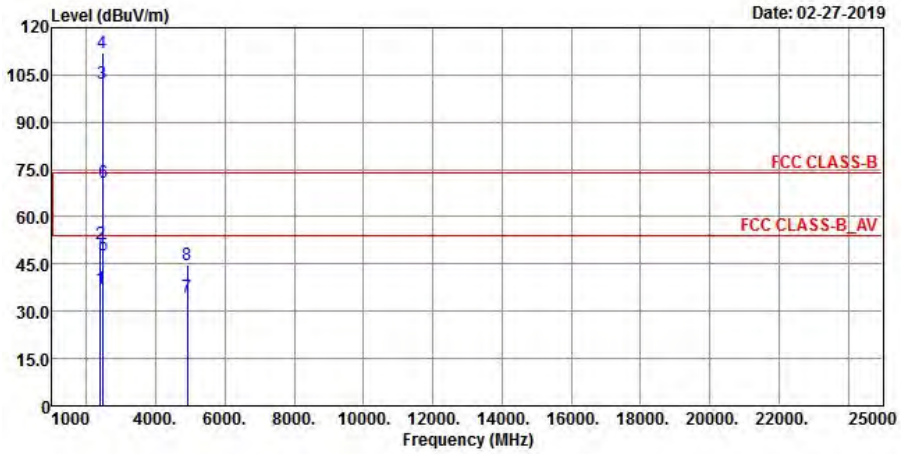
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	43.12	49.12	54	-10.88	27.16	4.36	37.52	126	0	Average
2389.94	63.67	69.67	74	-10.33	27.16	4.36	37.52	126	0	Peak
2437	99.08	104.76			27.38	4.4	37.46	126	0	Average
2437	108.31	113.99			27.38	4.4	37.46	126	0	Peak
2483.64	40.34	45.7	54	-13.66	27.53	4.43	37.32	126	0	Average
2483.64	59.53	64.89	74	-14.47	27.53	4.43	37.32	126	0	Peak
4874	34.87	49.62	54	-19.13	31.25	6.86	52.86	128	192	Average
4874	45.18	59.93	74	-28.82	31.25	6.86	52.86	128	192	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
2389.38	43.49	49.47	54	-10.51	27.16	4.36	37.5	100	344	Average
2389.38	61.11	67.09	74	-12.89	27.16	4.36	37.5	100	344	Peak
2437	96.29	101.97			27.38	4.4	37.46	100	344	Average
2437	105.77	111.45			27.38	4.4	37.46	100	344	Peak
2484.12	39.7	45.06	54	-14.3	27.53	4.43	37.32	100	344	Average
2484.12	56.96	62.32	74	-17.04	27.53	4.43	37.32	100	344	Peak
4874	34.55	49.3	54	-19.45	31.25	6.86	52.86	159	217	Average
4874	45.19	59.94	74	-28.81	31.25	6.86	52.86	159	217	Peak

Remarks:

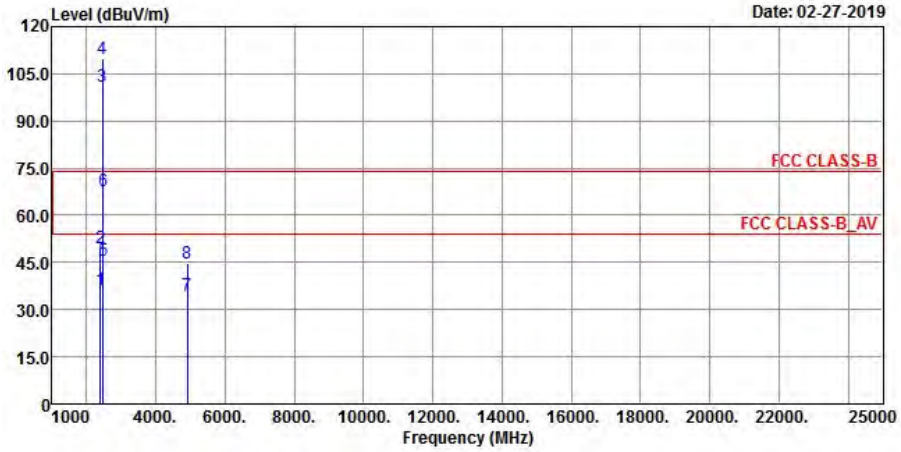
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



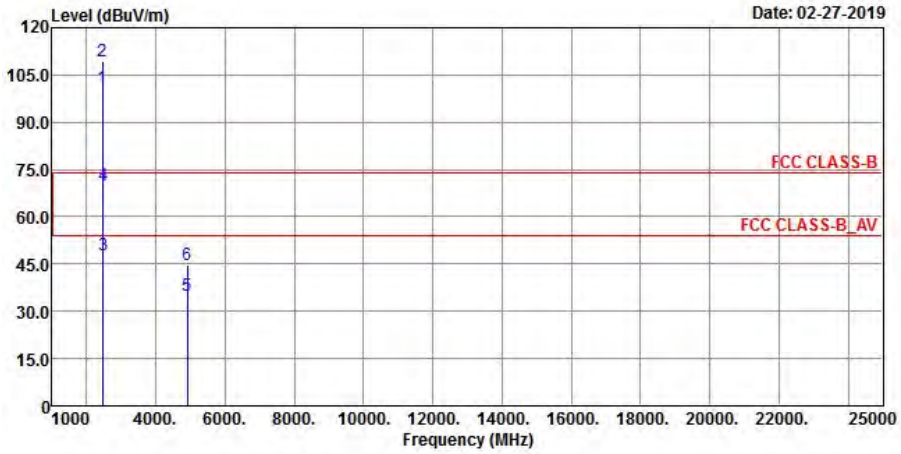
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2385.46	36.99	43.06	54	-17.01	27.08	4.35	37.5	162	188	Average
2385.46	51.55	57.62	74	-22.45	27.08	4.35	37.5	162	188	Peak
2452	102.1	107.7			27.38	4.41	37.39	162	188	Average
2452	112.18	117.78			27.38	4.41	37.39	162	188	Peak
2483.52	48.03	53.39	54	-5.97	27.53	4.43	37.32	162	188	Average
2483.52	70.74	76.1	74	-3.26	27.53	4.43	37.32	162	188	Peak
4904	34.61	49.27	54	-19.39	31.31	6.88	52.85	160	300	Average
4904	44.77	59.43	74	-29.23	31.31	6.88	52.85	160	300	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
2389.86	36.12	42.12	54	-17.88	27.16	4.36	37.52	112	23	Average
2389.86	49.72	55.72	74	-24.28	27.16	4.36	37.52	112	23	Peak
2452	101.17	106.77			27.38	4.41	37.39	112	23	Average
2452	110.03	115.63			27.38	4.41	37.39	112	23	Peak
2483.61	45.71	51.07	54	-8.29	27.53	4.43	37.32	112	23	Average
2483.61	67.57	72.93	74	-6.43	27.53	4.43	37.32	112	23	Peak
4904	34.64	49.3	54	-19.36	31.31	6.88	52.85	176	98	Average
4904	44.81	59.47	74	-29.19	31.31	6.88	52.85	176	98	Peak

Remarks:

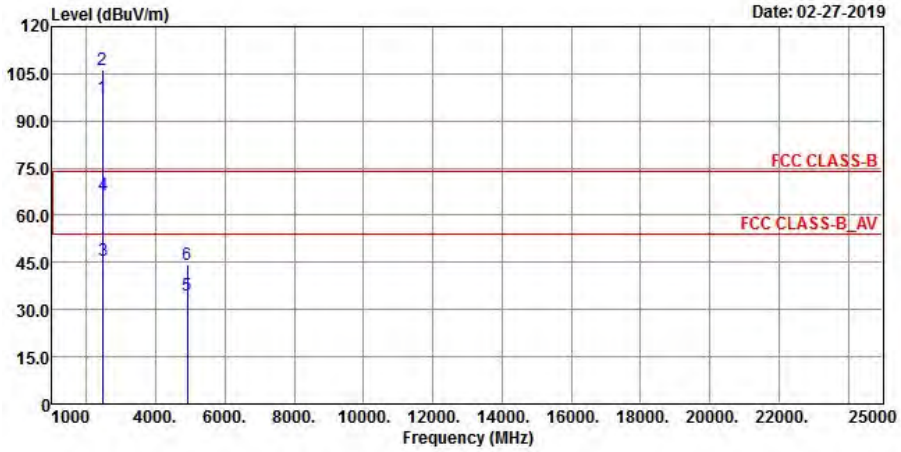
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2452 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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**	Jisyong Wang

Horizontal



Vertical



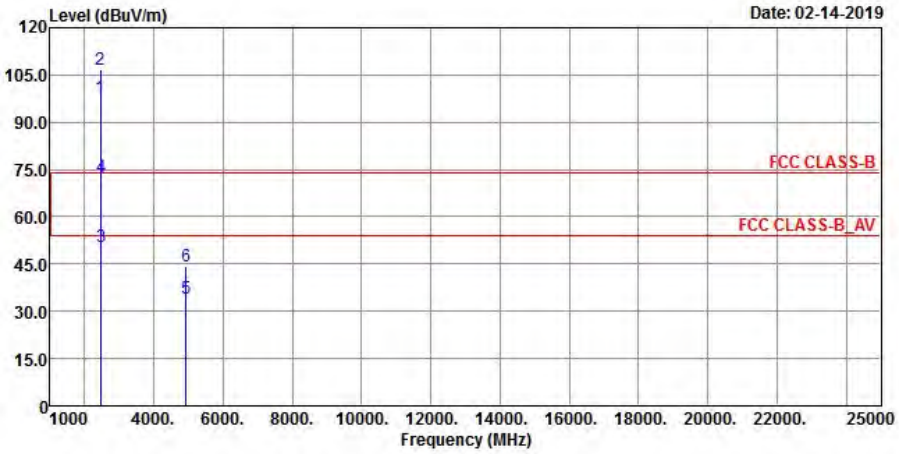
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2457	100.75	106.27			27.46	4.41	37.39	160	191	Average
2457	109.58	115.1			27.46	4.41	37.39	160	191	Peak
2483.56	47.75	53.11	54	-6.25	27.53	4.43	37.32	160	191	Average
2483.56	69.83	75.19	74	-4.17	27.53	4.43	37.32	160	191	Peak
4914	34.96	49.62	54	-19.04	31.31	6.88	52.85	216	118	Average
4914	44.88	59.54	74	-29.12	31.31	6.88	52.85	216	118	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
2457	97.56	103.08			27.46	4.41	37.39	107	16	Average
2457	106.16	111.68			27.46	4.41	37.39	107	16	Peak
2483.52	45.39	50.75	54	-8.61	27.53	4.43	37.32	107	16	Average
2483.52	66.26	71.62	74	-7.74	27.53	4.43	37.32	107	16	Peak
4914	34.34	49	54	-19.66	31.31	6.88	52.85	172	107	Average
4914	44.4	59.06	74	-29.6	31.31	6.88	52.85	172	107	Peak

Remarks:

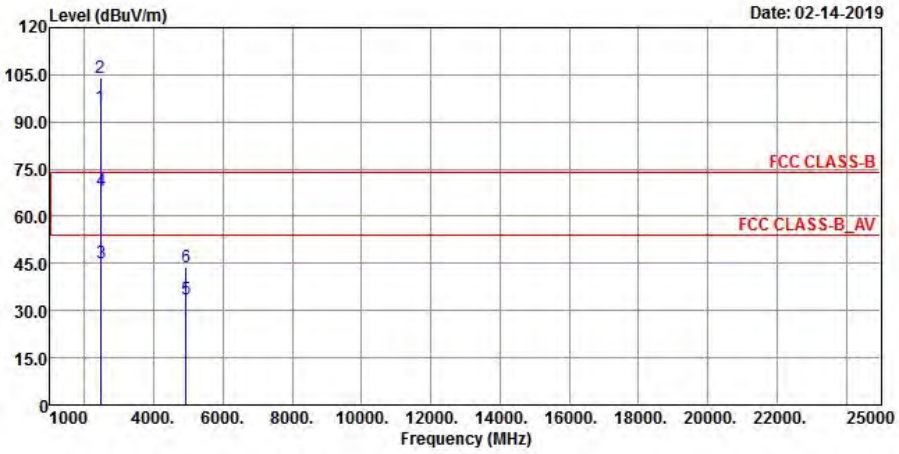
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2457 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



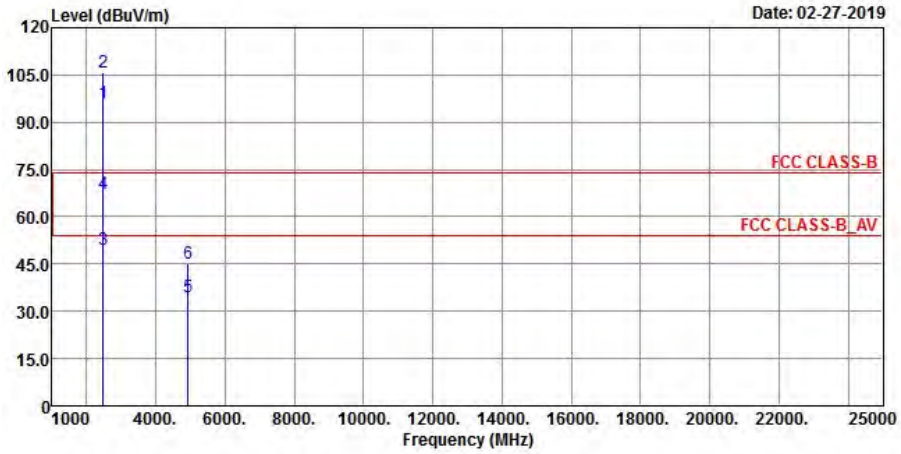
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2462	97.9	103.42			27.46	4.41	37.39	161	186	Average
2462	106.75	112.27			27.46	4.41	37.39	161	186	Peak
2483.8	50.5	55.86	54	-3.5	27.53	4.43	37.32	161	186	Average
2483.8	72.47	93.96	74	-1.53	27.53	4.94	53.96	161	186	Peak
4924	34	48.66	54	-20	31.34	6.89	52.89	135	189	Average
4924	44.09	58.75	74	-29.91	31.34	6.89	52.89	135	189	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
2462	94.78	100.3			27.46	4.41	37.39	100	9	Average
2462	104.18	109.7			27.46	4.41	37.39	100	9	Peak
2483.52	45.11	50.47	54	-8.89	27.53	4.43	37.32	100	9	Average
2483.52	68.26	73.62	74	-5.74	27.53	4.43	37.32	100	9	Peak
4924	33.63	48.29	54	-20.37	31.34	6.89	52.89	163	108	Average
4924	43.88	58.54	74	-30.12	31.34	6.89	52.89	163	108	Peak

Remarks:

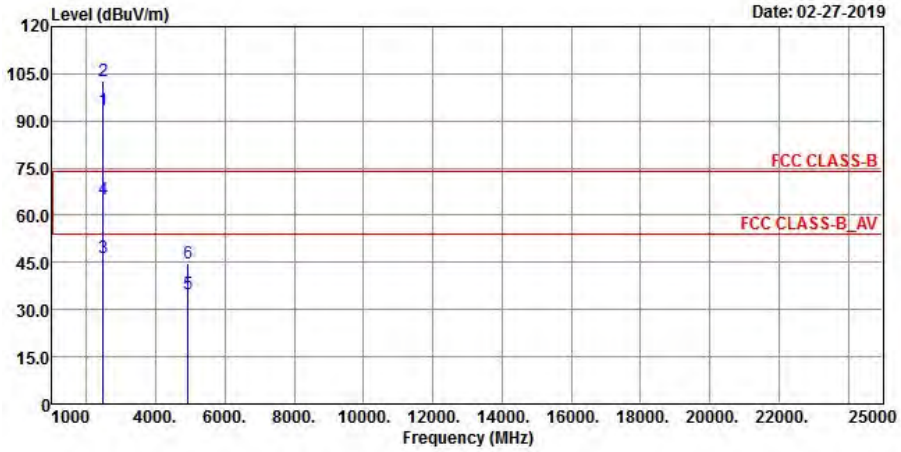
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2462 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 12	**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**	Jisyong Wang

Horizontal



Vertical



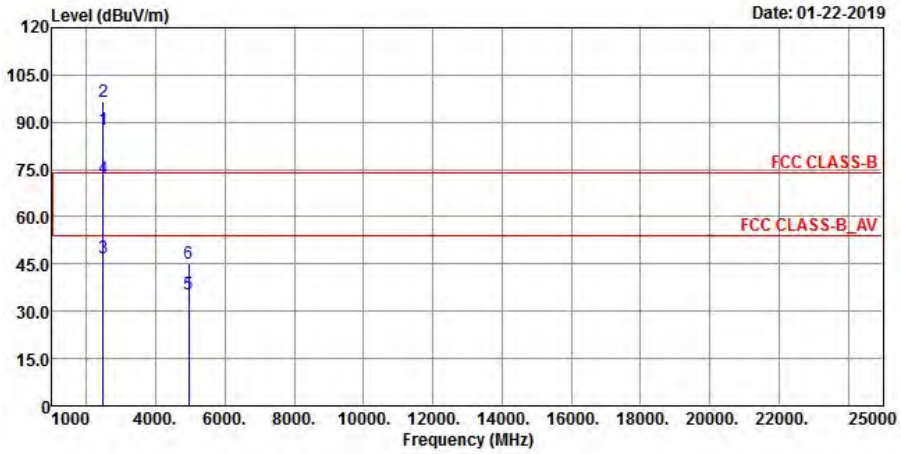
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2467	95.89	101.33			27.46	4.42	37.32	177	190	Average
2467	105.92	111.36			27.46	4.42	37.32	177	190	Peak
2483.52	49.73	55.09	54	-4.27	27.53	4.43	37.32	177	190	Average
2483.52	67.28	72.64	74	-6.72	27.53	4.43	37.32	177	190	Peak
4934	34.53	49.19	54	-19.47	31.34	6.89	52.89	122	317	Average
4934	45.1	59.76	74	-28.9	31.34	6.89	52.89	122	317	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
2467	93.3	98.74			27.46	4.42	37.32	123	26	Average
2467	102.64	108.08			27.46	4.42	37.32	123	26	Peak
2483.79	46.43	51.79	54	-7.57	27.53	4.43	37.32	123	26	Average
2483.79	65.01	70.37	74	-8.99	27.53	4.43	37.32	123	26	Peak
4934	34.86	49.52	54	-19.14	31.34	6.89	52.89	164	289	Average
4934	44.92	59.58	74	-29.08	31.34	6.89	52.89	164	289	Peak

Remarks:

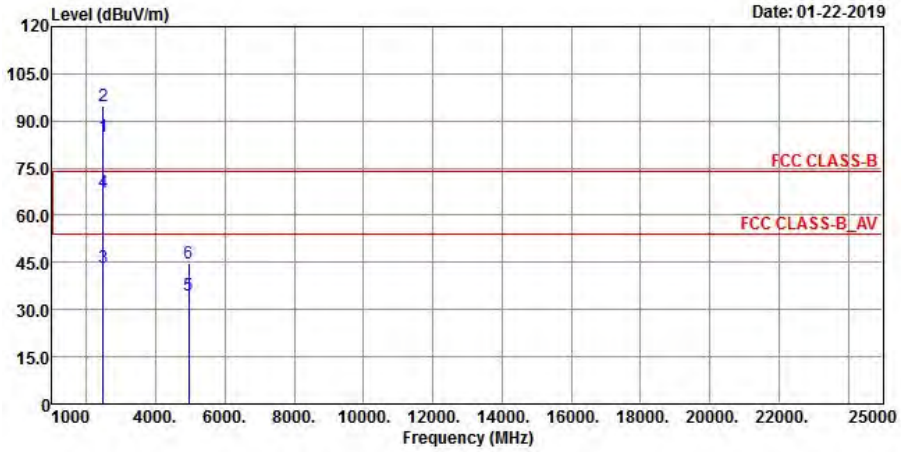
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2467 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 13	**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**	Jisyong Wang

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
2472	87.55	92.92			27.53	4.42	37.32	180	184	Average
2472	96.44	101.81			27.53	4.42	37.32	180	184	Peak
2483.5	47.09	52.45	54	-6.91	27.53	4.43	37.32	180	184	Average
2483.5	72.23	77.59	74	-1.77	27.53	4.43	37.32	180	184	Peak
4944	35.4	50.06	54	-18.6	31.37	6.89	52.92	143	169	Average
4944	45.14	59.8	74	-28.86	31.37	6.89	52.92	143	169	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
2472	85.07	90.44			27.53	4.42	37.32	100	30	Average
2472	94.93	100.3			27.53	4.42	37.32	100	30	Peak
2483.5	43.54	48.9	54	-10.46	27.53	4.43	37.32	100	30	Average
2483.5	67.15	72.51	74	-6.85	27.53	4.43	37.32	100	30	Peak
4944	34.41	49.07	54	-19.59	31.37	6.89	52.92	123	159	Average
4944	44.83	59.49	74	-29.17	31.37	6.89	52.92	123	159	Peak

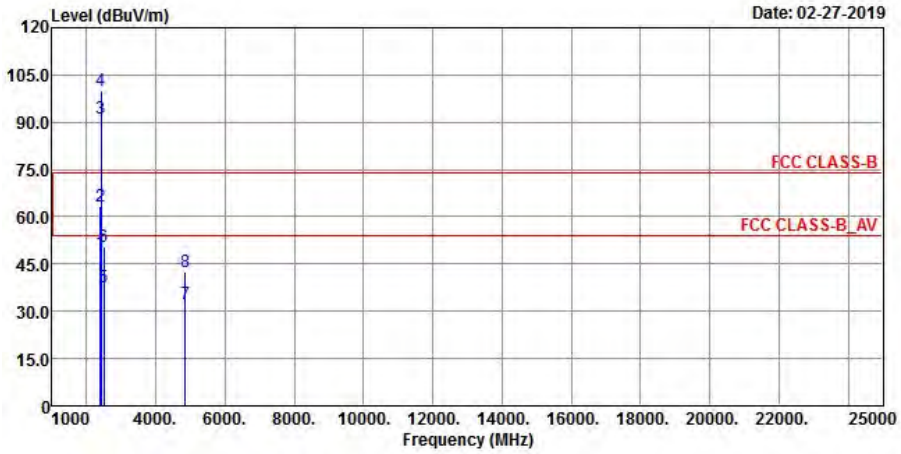
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2472 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

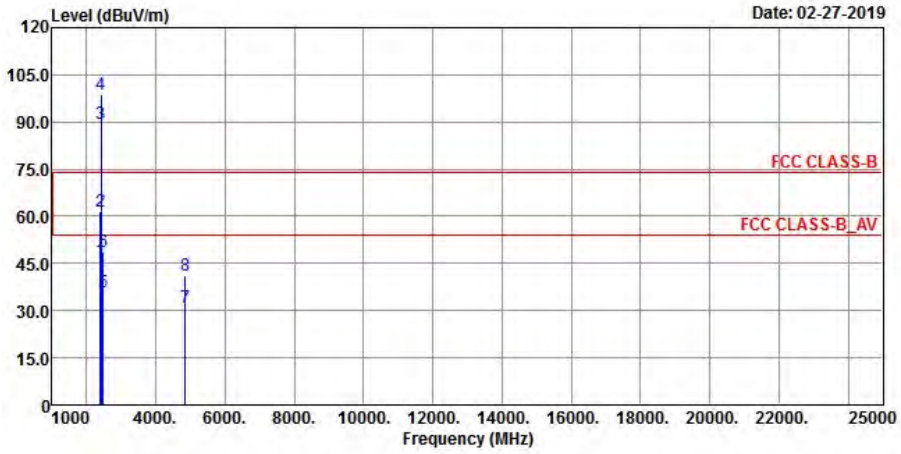
802.11n (HT40)

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



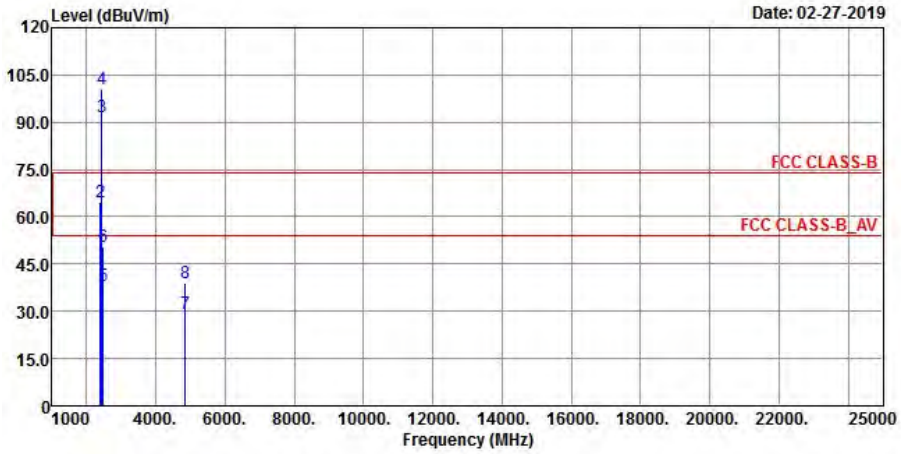
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	48.59	54.59	54	-5.41	27.16	4.36	37.52	171	0	Average
2389.94	63.2	69.2	74	-10.8	27.16	4.36	37.52	171	0	Peak
2422	91.26	97.02			27.31	4.39	37.46	171	0	Average
2422	100.16	105.92			27.31	4.39	37.46	171	0	Peak
2485.04	37.65	43.01	54	-16.35	27.53	4.43	37.32	171	0	Average
2485.04	50.67	56.03	74	-23.33	27.53	4.43	37.32	171	0	Peak
4844	32.38	47.23	54	-21.62	31.2	6.83	52.88	165	231	Average
4844	42.39	57.24	74	-31.61	31.2	6.83	52.88	165	231	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	46.25	52.25	54	-7.75	27.16	4.36	37.52	162	151	Average
2388	61.47	67.47	74	-12.53	27.16	4.36	37.52	162	151	Peak
2422	89.58	95.34			27.31	4.39	37.46	162	151	Average
2422	98.58	104.34			27.31	4.39	37.46	162	151	Peak
2484	36.01	41.37	54	-17.99	27.53	4.43	37.32	162	151	Average
2484	48.75	54.11	74	-25.25	27.53	4.43	37.32	162	151	Peak
4844	30.85	45.7	54	-23.15	31.2	6.83	52.88	122	211	Average
4844	41.05	55.9	74	-32.95	31.2	6.83	52.88	122	211	Peak

Remarks:

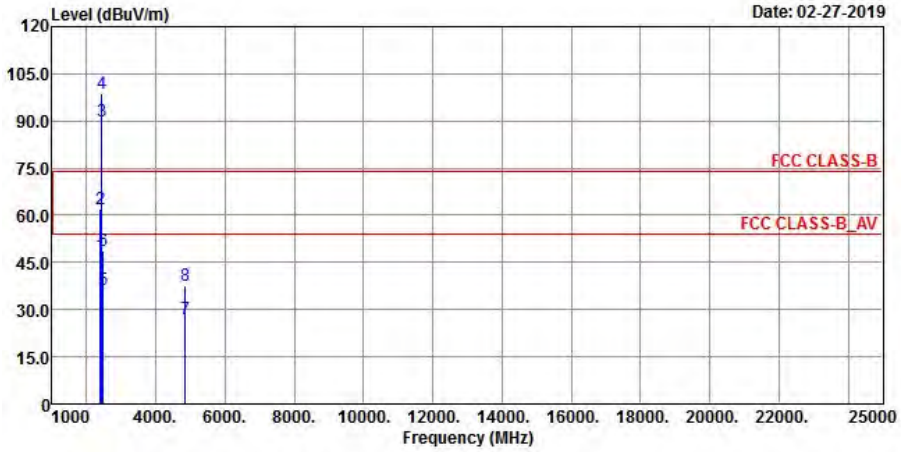
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2422 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 4	**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



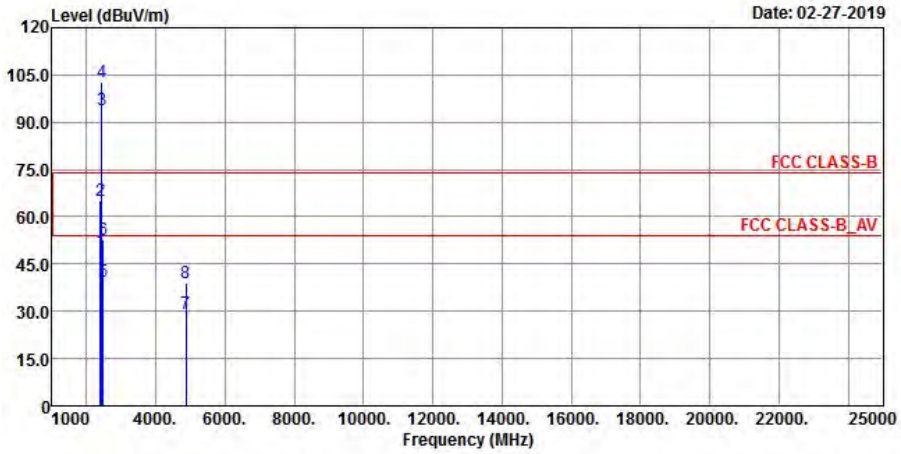
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	49.54	55.54	54	-4.46	27.16	4.36	37.52	140	2	Average
2389.8	64.61	70.61	74	-9.39	27.16	4.36	37.52	140	2	Peak
2427	91.65	97.41			27.31	4.39	37.46	140	2	Average
2427	100.37	106.13			27.31	4.39	37.46	140	2	Peak
2483.92	38.24	43.6	54	-15.76	27.53	4.43	37.32	140	2	Average
2483.92	50.32	55.68	74	-23.68	27.53	4.43	37.32	140	2	Peak
4854	29.01	43.82	54	-24.99	31.23	6.84	52.88	152	222	Average
4854	39.04	53.85	74	-34.96	31.23	6.84	52.88	152	222	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	47.25	53.25	54	-6.75	27.16	4.36	37.52	160	148	Average
2388	62.11	68.11	74	-11.89	27.16	4.36	37.52	160	148	Peak
2427	90.01	95.77			27.31	4.39	37.46	160	148	Average
2427	98.85	104.61			27.31	4.39	37.46	160	148	Peak
2483.8	36.14	41.5	54	-17.86	27.53	4.43	37.32	160	148	Average
2483.8	48.52	53.88	74	-25.48	27.53	4.43	37.32	160	148	Peak
4854	27.14	41.95	54	-26.86	31.23	6.84	52.88	185	221	Average
4854	37.58	52.39	74	-36.42	31.23	6.84	52.88	185	221	Peak

Remarks:

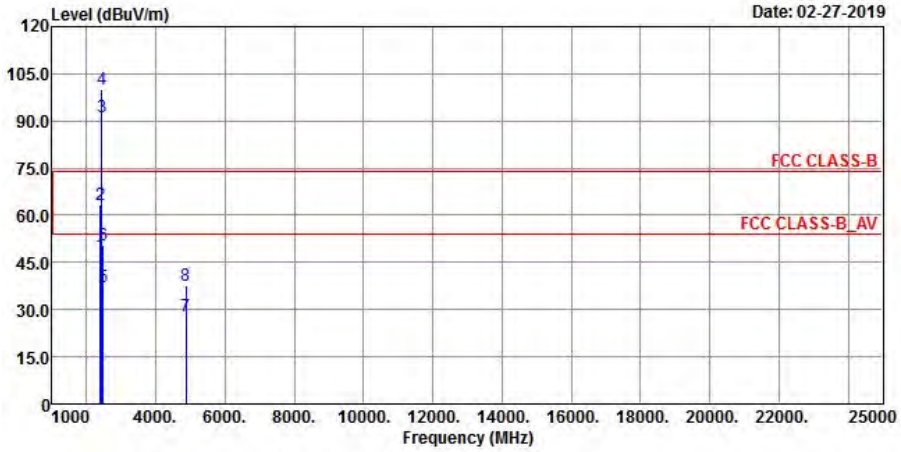
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2427 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 5	**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



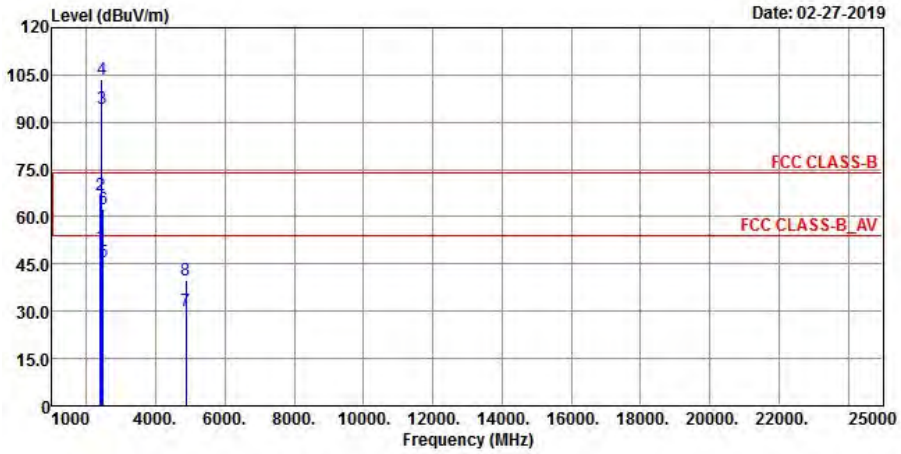
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	49.1	55.1	54	-4.9	27.16	4.36	37.52	124	0	Average
2389.94	65.13	71.13	74	-8.87	27.16	4.36	37.52	124	0	Peak
2432	93.73	99.49			27.31	4.39	37.46	124	0	Average
2432	102.91	108.67			27.31	4.39	37.46	124	0	Peak
2483.8	39.52	44.88	54	-14.48	27.53	4.43	37.32	124	0	Average
2483.8	52.74	58.1	74	-21.26	27.53	4.43	37.32	124	0	Peak
4864	29.01	43.79	54	-24.99	31.23	6.85	52.86	158	157	Average
4864	39.04	53.82	74	-34.96	31.23	6.85	52.86	158	157	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
2387	47.25	53.25	54	-6.75	27.16	4.36	37.52	159	144	Average
2387	63.11	69.11	74	-10.89	27.16	4.36	37.52	159	144	Peak
2432	91.42	97.18			27.31	4.39	37.46	159	144	Average
2432	100.25	106.01			27.31	4.39	37.46	159	144	Peak
2483.9	37.25	42.61	54	-16.75	27.53	4.43	37.32	159	144	Average
2483.9	50.47	55.83	74	-23.53	27.53	4.43	37.32	159	144	Peak
4864	27.85	42.63	54	-26.15	31.23	6.85	52.86	174	185	Average
4864	37.56	52.34	74	-36.44	31.23	6.85	52.86	174	185	Peak

Remarks:

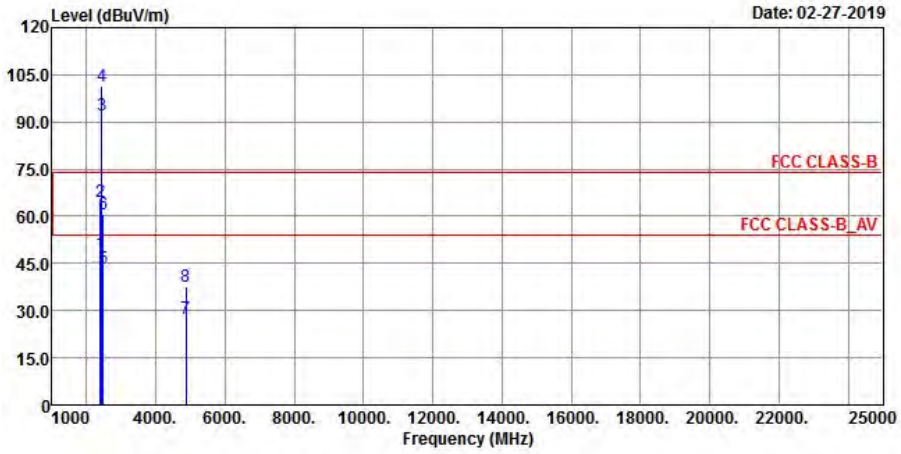
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2432 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



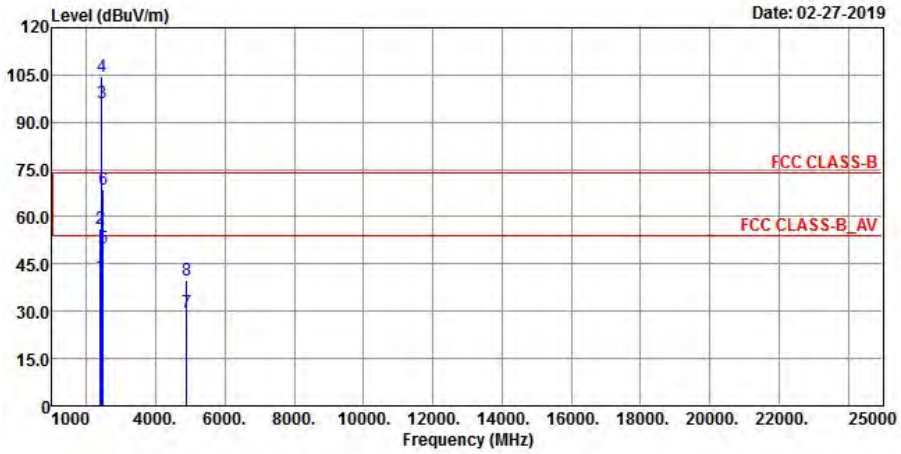
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.66	50.26	56.24	54	-3.74	27.16	4.36	37.5	171	0	Average
2389.66	66.71	72.69	74	-7.29	27.16	4.36	37.5	171	0	Peak
2437	94.52	100.2			27.38	4.4	37.46	171	0	Average
2437	103.42	109.1			27.38	4.4	37.46	171	0	Peak
2483.84	45.56	50.92	54	-8.44	27.53	4.43	37.32	171	0	Average
2483.84	62.55	67.91	74	-11.45	27.53	4.43	37.32	171	0	Peak
4874	29.98	44.73	54	-24.02	31.25	6.86	52.86	152	231	Average
4874	39.97	54.72	74	-34.03	31.25	6.86	52.86	152	231	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
2387	48.25	54.23	54	-5.75	27.16	4.36	37.5	157	144	Average
2387	64.74	70.72	74	-9.26	27.16	4.36	37.5	157	144	Peak
2437	92.25	97.93			27.38	4.4	37.46	157	144	Average
2437	101.23	106.91			27.38	4.4	37.46	157	144	Peak
2483.9	43.25	48.61	54	-10.75	27.53	4.43	37.32	157	144	Average
2483.9	60.58	65.94	74	-13.42	27.53	4.43	37.32	157	144	Peak
4874	27.56	42.31	54	-26.44	31.25	6.86	52.86	125	111	Average
4874	37.65	52.4	74	-36.35	31.25	6.86	52.86	125	111	Peak

Remarks:

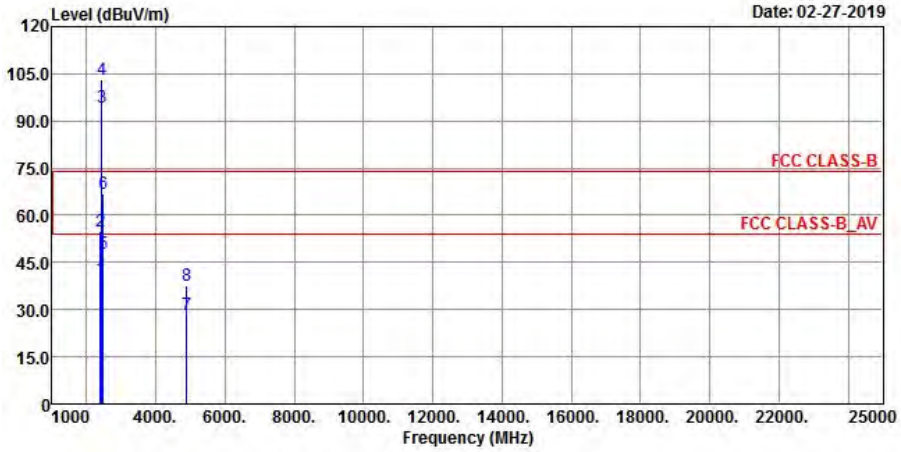
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2437 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 7	**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



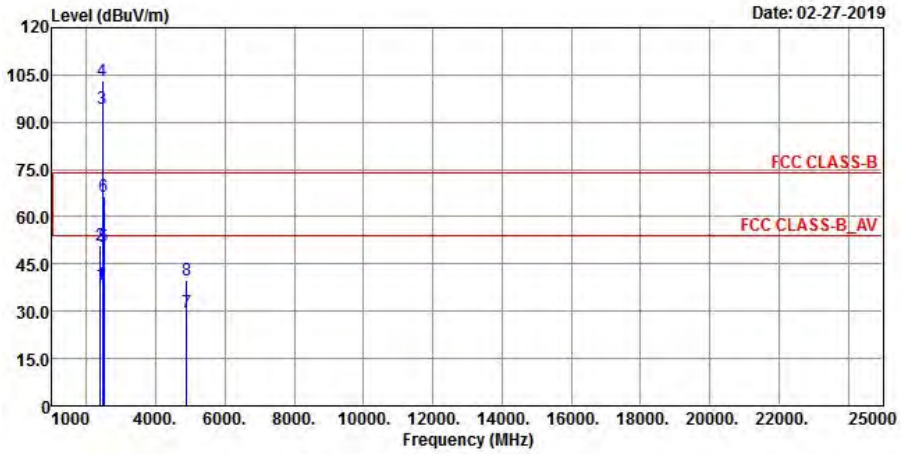
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.66	41.02	47	54	-12.98	27.16	4.36	37.5	160	188	Average
2389.66	56.4	62.38	74	-17.6	27.16	4.36	37.5	160	188	Peak
2442	95.99	101.6			27.38	4.4	37.39	160	188	Average
2442	104.54	110.15			27.38	4.4	37.39	160	188	Peak
2483.52	49.83	55.19	54	-4.17	27.53	4.43	37.32	160	188	Average
2483.52	68.77	74.13	74	-5.23	27.53	4.43	37.32	160	188	Peak
4884	29.64	44.38	54	-24.36	31.25	6.87	52.86	165	295	Average
4884	39.65	54.39	74	-34.35	31.25	6.87	52.86	165	295	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	40.02	46	54	-13.98	27.16	4.36	37.5	157	158	Average
2388	55.08	61.06	74	-18.92	27.16	4.36	37.5	157	158	Peak
2442	94.25	99.86			27.38	4.4	37.39	157	158	Average
2442	102.98	108.59			27.38	4.4	37.39	157	158	Peak
2483.9	47.78	53.14	54	-6.22	27.53	4.43	37.32	157	158	Average
2483.9	67.06	72.42	74	-6.94	27.53	4.43	37.32	157	158	Peak
4884	28.52	43.26	54	-25.48	31.25	6.87	52.86	165	295	Average
4884	37.75	52.49	74	-36.25	31.25	6.87	52.86	165	295	Peak

Remarks:

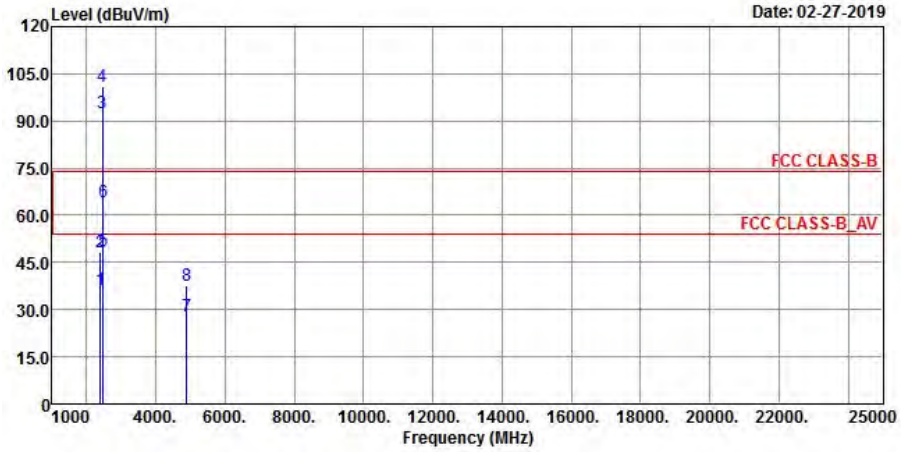
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2442 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 8	**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



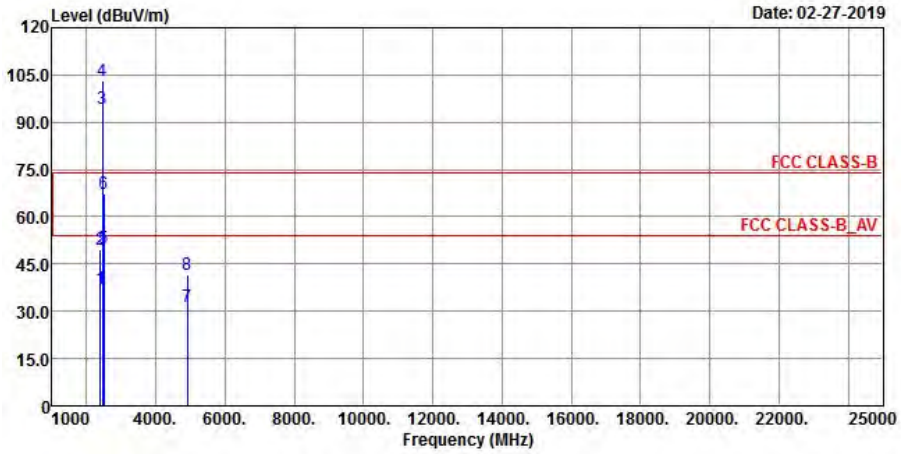
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2387.84	38.33	44.31	54	-15.67	27.16	4.36	37.5	160	191	Average
2387.84	50.91	56.89	74	-23.09	27.16	4.36	37.5	160	191	Peak
2447	94.31	99.92			27.38	4.4	37.39	160	191	Average
2447	103.36	108.97			27.38	4.4	37.39	160	191	Peak
2484.2	50.64	56	54	-3.36	27.53	4.43	37.32	160	191	Average
2484.2	66.53	71.89	74	-7.47	27.53	4.43	37.32	160	191	Peak
4894	29.61	44.31	54	-24.39	31.28	6.87	52.85	165	222	Average
4894	39.65	54.35	74	-34.35	31.28	6.87	52.85	165	222	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	36.25	42.23	54	-17.75	27.16	4.36	37.5	156	159	Average
2386	48.14	54.12	74	-25.86	27.16	4.36	37.5	156	159	Peak
2447	92.52	98.13			27.38	4.4	37.39	156	159	Average
2447	101.16	106.77			27.38	4.4	37.39	156	159	Peak
2483.7	48.52	53.88	54	-5.48	27.53	4.43	37.32	156	159	Average
2483.7	64.26	69.62	74	-9.74	27.53	4.43	37.32	156	159	Peak
4894	27.85	42.55	54	-26.15	31.28	6.87	52.85	184	165	Average
4894	37.45	52.15	74	-36.55	31.28	6.87	52.85	184	165	Peak

Remarks:

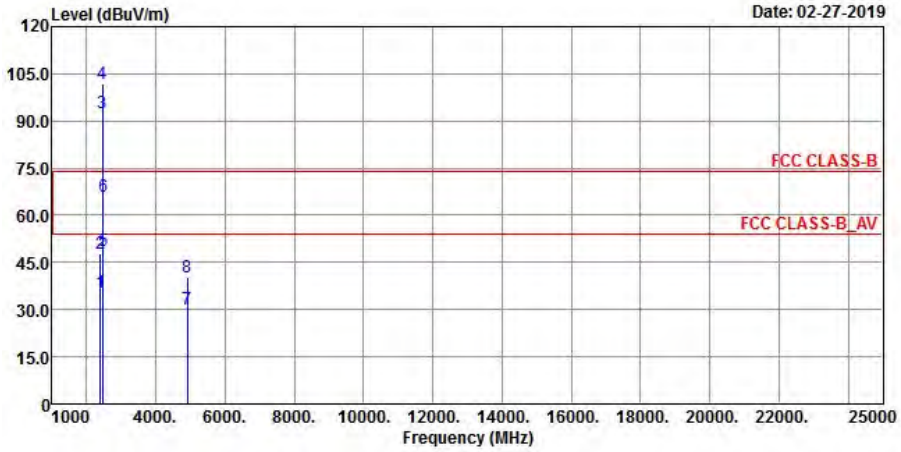
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2447 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



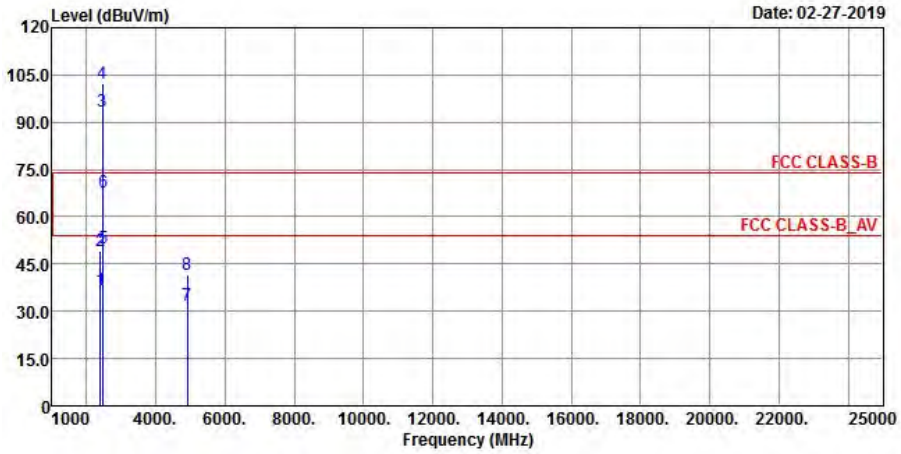
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	37.37	43.37	54	-16.63	27.16	4.36	37.52	160	189	Average
2389.8	49.64	55.64	74	-24.36	27.16	4.36	37.52	160	189	Peak
2452	94.27	99.87			27.38	4.41	37.39	160	189	Average
2452	103.06	108.66			27.38	4.41	37.39	160	189	Peak
2484.72	50.02	55.38	54	-3.98	27.53	4.43	37.32	160	189	Average
2484.72	67.36	72.72	74	-6.64	27.53	4.43	37.32	160	189	Peak
4904	31.57	46.23	54	-22.43	31.31	6.88	52.85	165	231	Average
4904	41.58	56.24	74	-32.42	31.31	6.88	52.85	165	231	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
2388.6	35.58	41.58	54	-18.42	27.16	4.36	37.52	149	172	Average
2388.6	47.62	53.62	74	-26.38	27.16	4.36	37.52	149	172	Peak
2452	92.44	98.04			27.38	4.41	37.39	149	172	Average
2452	101.65	107.25			27.38	4.41	37.39	149	172	Peak
2483.9	48.52	53.88	54	-5.48	27.53	4.43	37.32	149	172	Average
2483.9	65.95	71.31	74	-8.05	27.53	4.43	37.32	149	172	Peak
4904	30.12	44.78	54	-23.88	31.31	6.88	52.85	165	284	Average
4904	40.25	54.91	74	-33.75	31.31	6.88	52.85	165	284	Peak

Remarks:

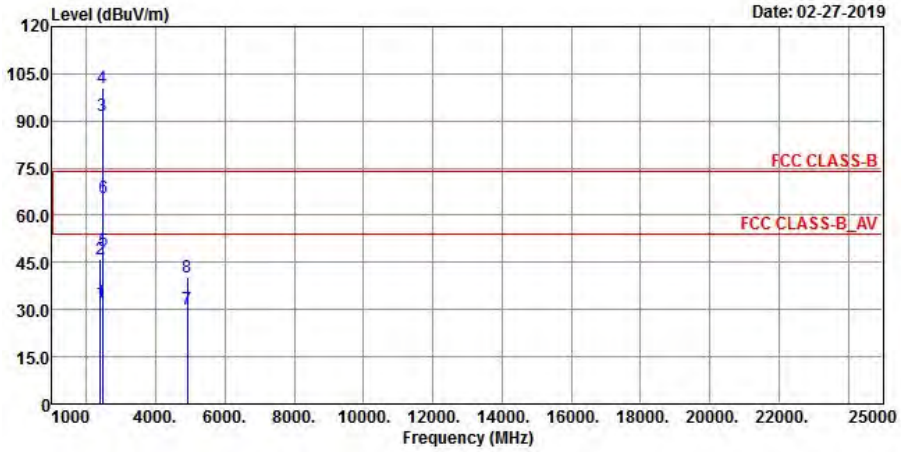
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2452 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



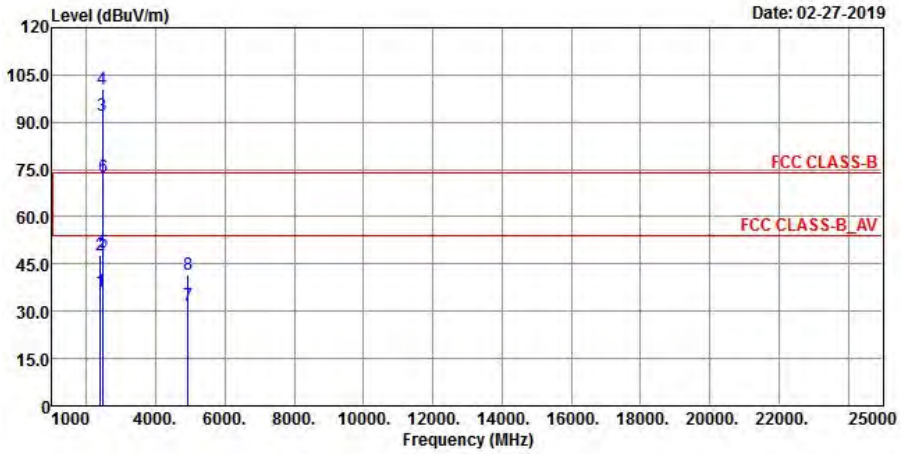
Antennal Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	36.72	42.72	54	-17.28	27.16	4.36	37.52	160	189	Average
2389.8	49.15	55.15	74	-24.85	27.16	4.36	37.52	160	189	Peak
2457	93.34	98.86			27.46	4.41	37.39	160	189	Average
2457	102.33	107.85			27.46	4.41	37.39	160	189	Peak
2483.92	50.09	55.45	54	-3.91	27.53	4.43	37.32	160	189	Average
2483.92	67.67	73.03	74	-6.33	27.53	4.43	37.32	160	189	Peak
4914	31.71	46.37	54	-22.29	31.31	6.88	52.85	185	265	Average
4914	41.72	56.38	74	-32.28	31.31	6.88	52.85	185	265	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
2387	32.48	38.48	54	-21.52	27.16	4.36	37.52	159	148	Average
2387	46.11	52.11	74	-27.89	27.16	4.36	37.52	159	148	Peak
2457	91.85	97.37			27.46	4.41	37.39	159	148	Average
2457	100.45	105.97			27.46	4.41	37.39	159	148	Peak
2484	48.62	53.98	54	-5.38	27.53	4.43	37.32	159	148	Average
2484	65.58	70.94	74	-8.42	27.53	4.43	37.32	159	148	Peak
4914	30.11	44.77	54	-23.89	31.31	6.88	52.85	132	265	Average
4914	40.15	54.81	74	-33.85	31.31	6.88	52.85	132	265	Peak

Remarks:

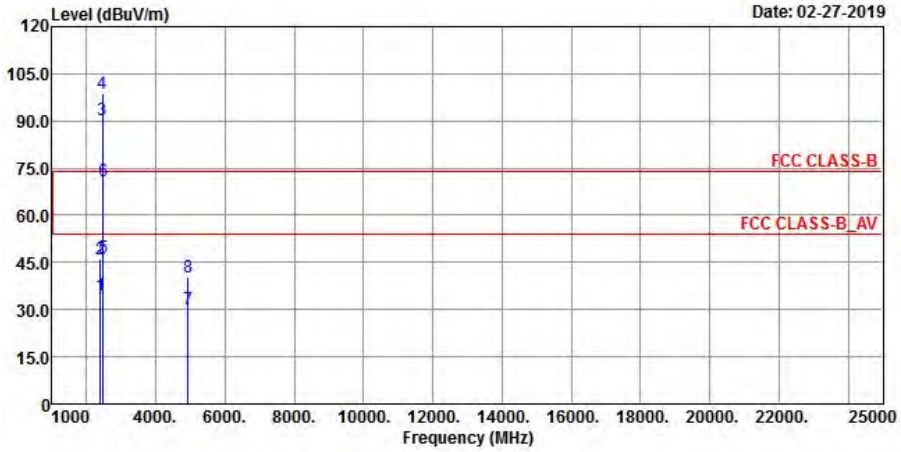
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 2457 MHz: Fundamental frequency.
3. The emission levels of other frequencies were very low against the limit.

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



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
2387.56	36.41	42.39	54	-17.59	27.16	4.36	37.5	176	188	Average
2387.56	48	53.98	74	-26	27.16	4.36	37.5	176	188	Peak
2462	92.24	97.76			27.46	4.41	37.39	176	188	Average
2462	100.72	106.24			27.46	4.41	37.39	176	188	Peak
2483.52	48.59	53.95	54	-5.41	27.53	4.43	37.32	176	188	Average
2483.52	72.4	77.76	74	-1.6	27.53	4.43	37.32	176	188	Peak
4924	31.71	46.37	54	-22.29	31.34	6.89	52.89	185	295	Average
4924	41.72	56.38	74	-32.28	31.34	6.89	52.89	185	295	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
2385	34.52	40.5	54	-19.48	27.16	4.36	37.5	158	135	Average
2385	46.25	52.23	74	-27.75	27.16	4.36	37.5	158	135	Peak
2462	90.47	95.99			27.46	4.41	37.39	158	135	Average
2462	98.56	104.08			27.46	4.41	37.39	158	135	Peak
2483.9	46.52	51.88	54	-7.48	27.53	4.43	37.32	158	135	Average
2483.9	70.65	76.01	74	-3.35	27.53	4.43	37.32	158	135	Peak
4924	30.25	44.91	54	-23.75	31.34	6.89	52.89	192	255	Average
4924	40.45	55.11	74	-33.55	31.34	6.89	52.89	192	255	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp 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.

9 kHz ~ 30 MHz Data:

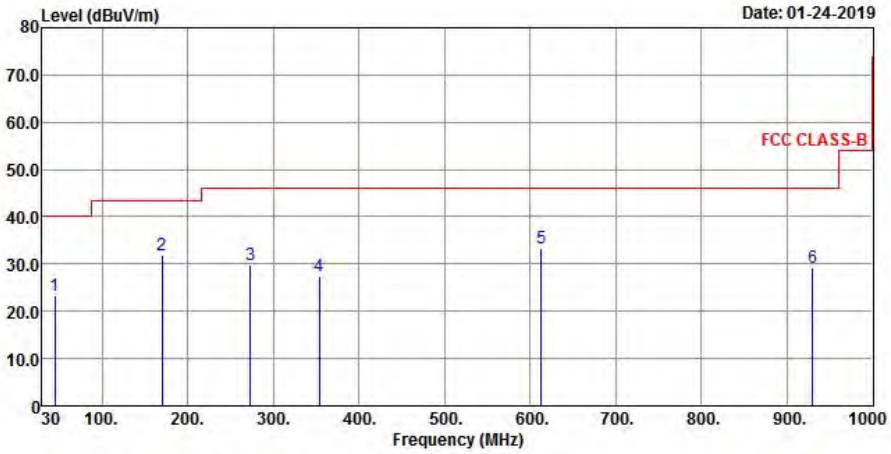
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

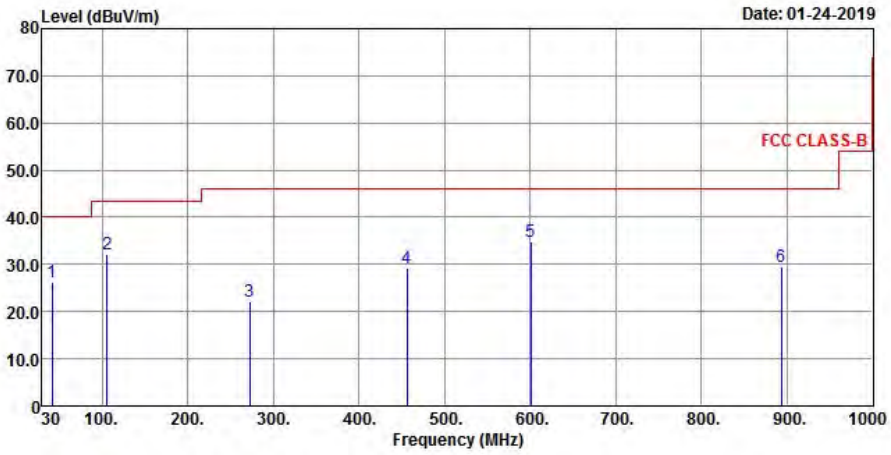
802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 11	**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**	Jisyong Wang

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
44.55	23.24	40.27	40	-16.76	13.6	0.51	31.14	114	213	Peak
169.68	32.01	50.91	43.5	-11.49	11.76	1.07	31.73	155	166	Peak
273.47	29.69	47.93	46	-16.31	12.17	1.54	31.95	138	309	Peak
353.98	27.57	43.32	46	-18.43	14.24	1.9	31.89	119	78	Peak
612.97	33.22	42.62	46	-12.78	19.76	2.95	32.11	103	1823	Peak
930.16	29.36	33.51	46	-16.64	23.68	4.16	31.99	119	359	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
41.64	26.36	43.35	40	-13.64	13.56	0.5	31.05	183	214	Peak
105.66	32.12	53.62	43.5	-11.38	9.62	0.77	31.89	174	133	Peak
272.5	22.09	40.38	46	-23.91	12.14	1.54	31.97	152	259	Peak
455.83	29.25	42.49	46	-16.75	16.45	2.3	31.99	163	346	Peak
600.36	34.7	44.44	46	-11.3	19.61	2.9	32.25	151	46	Peak
893.3	29.57	34.15	46	-16.43	23.42	4	32	153	124	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value.
2. 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	100424	Jan. 03, 2019	Jan. 02, 2020
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100104	Dec. 18, 2018	Dec. 17, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2018	Aug. 12, 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 2.
3. The VCCI Site Registration No. is C-2047.

4.2.3 Test Procedures

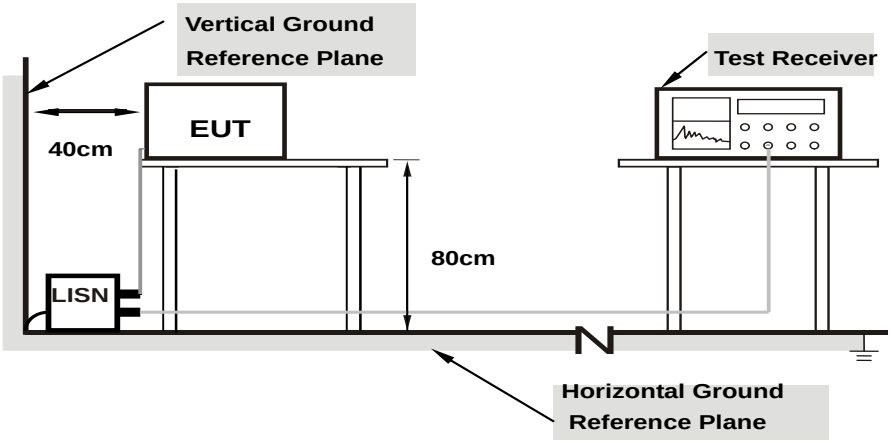
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50 uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. 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

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

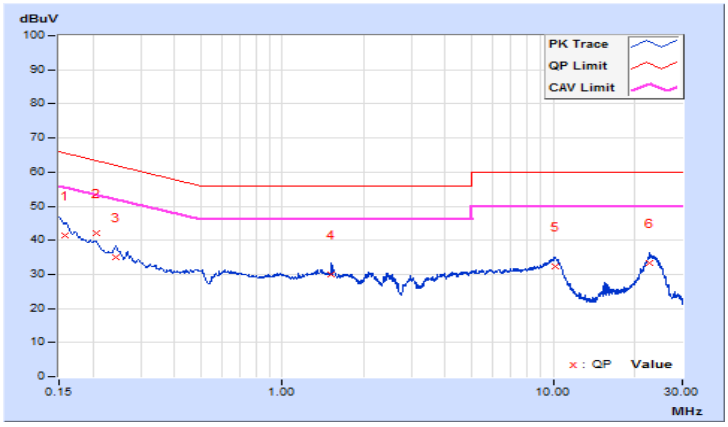
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2019/1/27

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	0.15715	10.05	31.43	17.39	41.48	27.44	65.61	55.61	-24.13	-28.17
2	**0.20625**	**10.06**	**31.99**	**16.68**	**42.05**	**26.74**	**63.35**	**53.35**	**-21.30**	**-26.61**
3	0.24359	10.06	24.84	8.66	34.90	18.72	61.97	51.97	-27.07	-33.25
4	1.52217	10.08	19.86	4.62	29.94	14.70	56.00	46.00	-26.06	-31.30
5	10.23225	10.30	22.06	4.34	32.36	14.64	60.00	50.00	-27.64	-35.36
6	22.81425	10.45	22.77	4.45	33.22	14.90	60.00	50.00	-26.78	-35.10

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

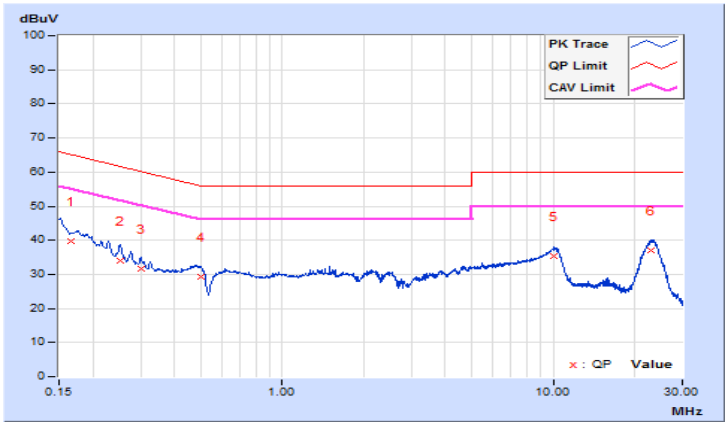


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2019/1/27

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	0.16524	10.06	29.75	10.62	39.81	20.68	65.20	55.20	-25.39	-34.52
2	0.25144	10.07	24.05	4.87	34.12	14.94	61.71	51.71	-27.59	-36.77
3	0.30089	10.07	21.73	8.27	31.80	18.34	60.22	50.22	-28.42	-31.88
4	0.50218	10.07	19.22	4.32	29.29	14.39	56.00	46.00	-26.71	-31.61
5	10.11975	10.36	25.04	10.27	35.40	20.63	60.00	50.00	-24.60	-29.37
6	22.98750	10.58	26.62	9.37	37.20	19.95	60.00	50.00	-22.80	-30.05

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

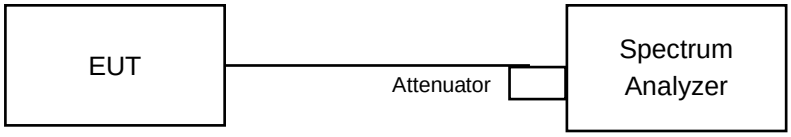


4.3 6 dB Bandwidth Measurement

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

a. Set resolution bandwidth (RBW) = 100 kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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	8.10	0.5	Pass
6	2437	8.58	0.5	Pass
11	2462	8.14	0.5	Pass
12	2467	8.09	0.5	Pass
13	2472	8.09	0.5	Pass

802.11g

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.29	0.5	Pass
2	2417	16.32	0.5	Pass
3	2422	16.32	0.5	Pass
6	2437	16.31	0.5	Pass
9	2452	16.33	0.5	Pass
10	2457	16.32	0.5	Pass
11	2462	15.55	0.5	Pass
12	2467	16.32	0.5	Pass
13	2472	16.33	0.5	Pass

802.11n (HT20)

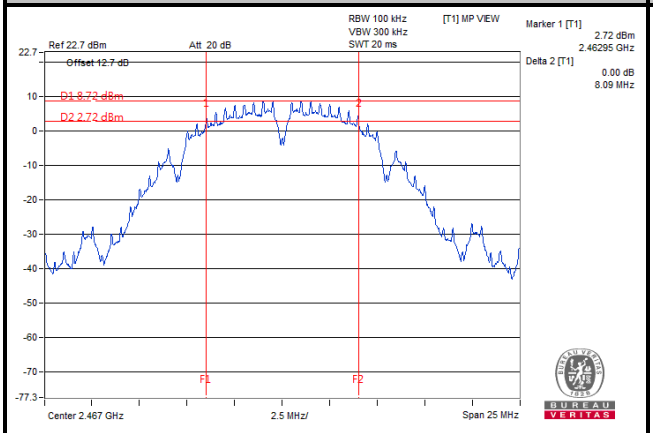
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.07	0.5	Pass
2	2417	17.18	0.5	Pass
3	2422	17.18	0.5	Pass
6	2437	16.94	0.5	Pass
9	2452	16.97	0.5	Pass
10	2457	17.08	0.5	Pass
11	2462	15.95	0.5	Pass
12	2467	17.22	0.5	Pass
13	2472	17.31	0.5	Pass

802.11n (HT40)

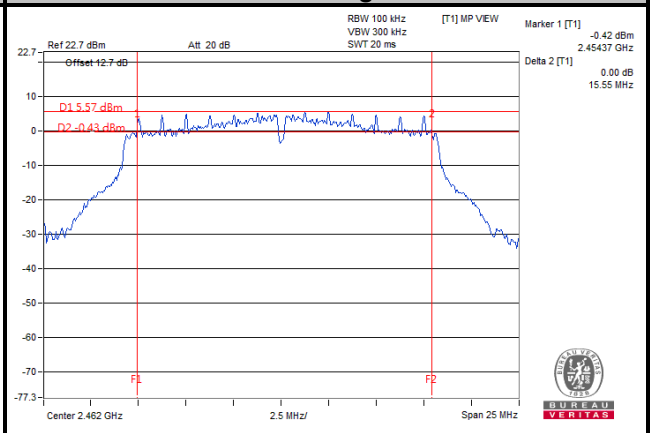
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	35.54	0.5	Pass
4	2427	35.61	0.5	Pass
5	2432	35.64	0.5	Pass
6	2437	35.64	0.5	Pass
7	2442	35.58	0.5	Pass
8	2447	35.66	0.5	Pass
9	2452	35.60	0.5	Pass
10	2457	35.58	0.5	Pass
11	2462	35.59	0.5	Pass

Spectrum Plot of Worst Value

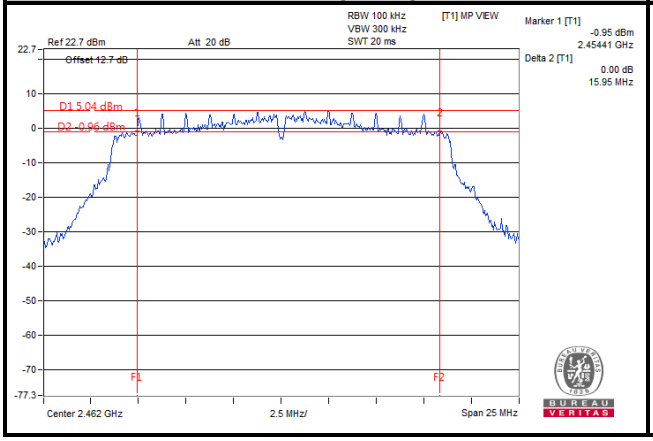
802.11b



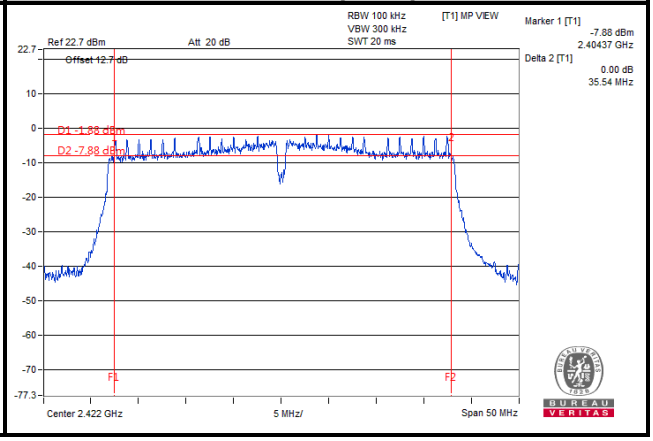
802.11g



802.11n (HT20)

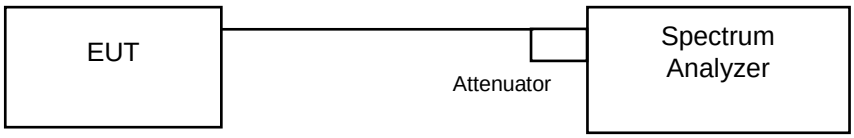


802.11n (HT40)



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	11.94	Pass
6	2437	12.00	Pass
11	2462	12.00	Pass
12	2467	11.82	Pass
13	2472	10.98	Pass

802.11g

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	16.86	Pass
2	2417	16.92	Pass
3	2422	16.92	Pass
6	2437	17.16	Pass
9	2452	16.92	Pass
10	2457	16.92	Pass
11	2462	16.68	Pass
12	2467	16.92	Pass
13	2472	16.92	Pass

802.11n (HT20)

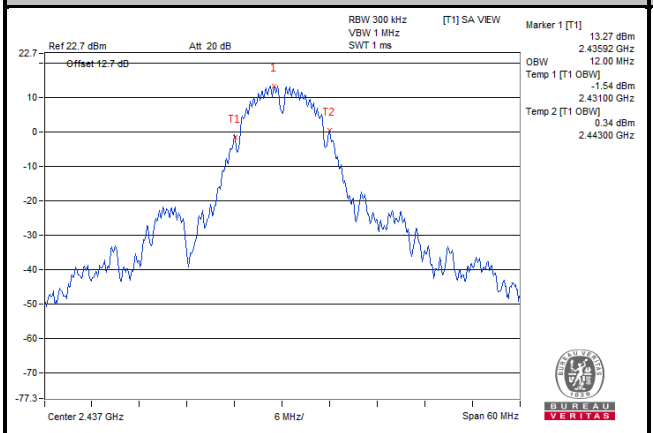
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
1	2412	17.94	Pass
2	2417	18.12	Pass
3	2422	18.00	Pass
6	2437	18.12	Pass
9	2452	18.00	Pass
10	2457	18.00	Pass
11	2462	17.88	Pass
12	2467	17.88	Pass
13	2472	17.88	Pass

802.11n (HT40)

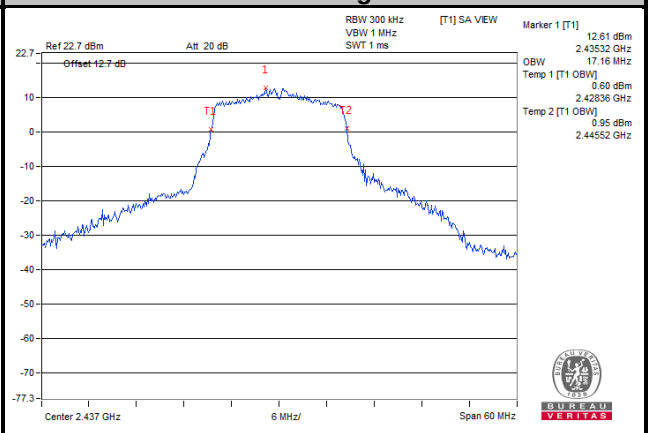
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	Pass / Fail
3	2422	36.42	Pass
4	2427	36.36	Pass
5	2432	36.48	Pass
6	2437	36.72	Pass
7	2442	36.36	Pass
8	2447	36.36	Pass
9	2452	36.36	Pass
10	2457	36.48	Pass
11	2462	36.72	Pass

Spectrum Plot of Worst Value

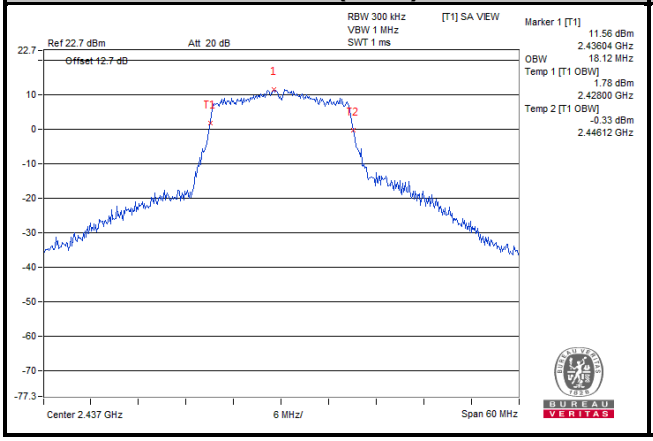
802.11b



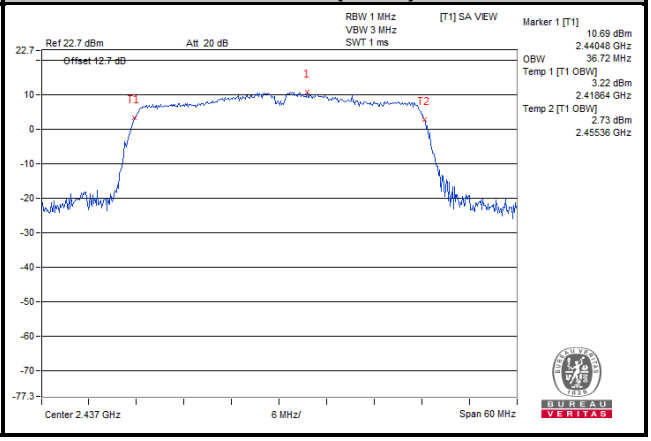
802.11g



802.11n (HT20)



802.11n (HT40)

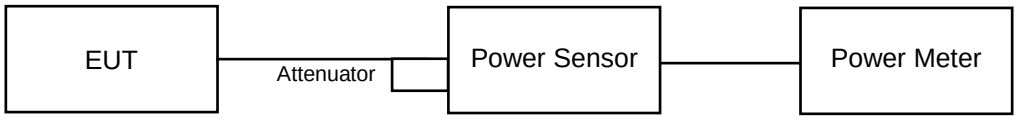


4.5 Conducted Output Power Measurement

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	93.541	19.71	30	Pass
6	2437	97.724	19.90	30	Pass
11	2462	67.608	18.30	30	Pass
12	2467	39.446	15.96	30	Pass
13	2472	14.894	11.73	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	30.832	14.89	30	Pass
2	2417	43.152	16.35	30	Pass
3	2422	56.364	17.51	30	Pass
6	2437	88.716	19.48	30	Pass
9	2452	59.293	17.73	30	Pass
10	2457	47.753	16.79	30	Pass
11	2462	36.224	15.59	30	Pass
12	2467	21.086	13.24	30	Pass
13	2472	8.71	9.40	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	26.485	14.23	30	Pass
2	2417	52.24	17.18	30	Pass
3	2422	66.374	18.22	30	Pass
6	2437	87.902	19.44	30	Pass
9	2452	67.764	18.31	30	Pass
10	2457	50.699	17.05	30	Pass
11	2462	29.58	14.71	30	Pass
12	2467	16.255	12.11	30	Pass
13	2472	4.064	6.09	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	10.375	10.16	30	Pass
4	2427	13.002	11.14	30	Pass
5	2432	16.596	12.20	30	Pass
6	2437	24.155	13.83	30	Pass
7	2442	18.793	12.74	30	Pass
8	2447	14.689	11.67	30	Pass
9	2452	12.023	10.80	30	Pass
10	2457	10.209	10.09	30	Pass
11	2462	8.453	9.27	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.

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

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d. Set the VBW ≥ 3 × RBW.
e. Detector = peak.
f. Sweep time = auto couple.
g. Trace mode = max hold.
h. Allow trace to fully stabilize.
i. 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	-7.05	8	Pass
6	2437	-6.81	8	Pass
11	2462	-9.20	8	Pass
12	2467	-11.38	8	Pass
13	2472	-15.18	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
1	2412	-11.12	8	Pass
2	2417	-9.75	8	Pass
3	2422	-9.00	8	Pass
6	2437	-7.19	8	Pass
9	2452	-9.37	8	Pass
10	2457	-9.50	8	Pass
11	2462	-10.59	8	Pass
12	2467	-13.14	8	Pass
13	2472	-17.63	8	Pass

802.11n (HT20)

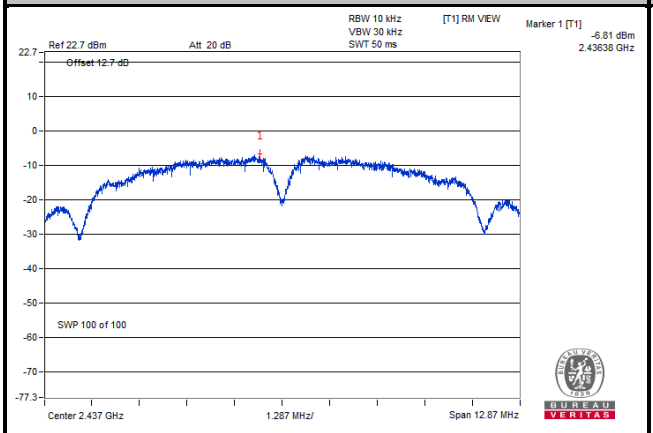
Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
1	2412	-14.33	8	Pass
2	2417	-11.16	8	Pass
3	2422	-10.59	8	Pass
6	2437	-9.52	8	Pass
9	2452	-10.22	8	Pass
10	2457	-11.42	8	Pass
11	2462	-12.61	8	Pass
12	2467	-15.72	8	Pass
13	2472	-22.11	8	Pass

802.11n (HT40)

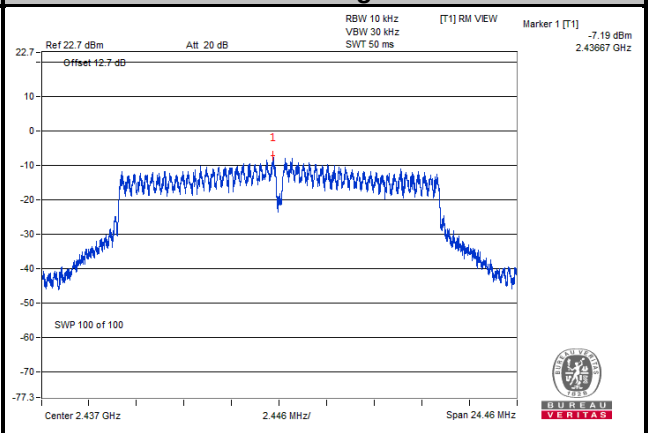
Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
3	2422	-19.30	8	Pass
4	2427	-18.12	8	Pass
5	2432	-17.00	8	Pass
6	2437	-15.53	8	Pass
7	2442	-16.51	8	Pass
8	2447	-17.54	8	Pass
9	2452	-18.32	8	Pass
10	2457	-19.11	8	Pass
11	2462	-20.59	8	Pass

Spectrum Plot of Worst Value

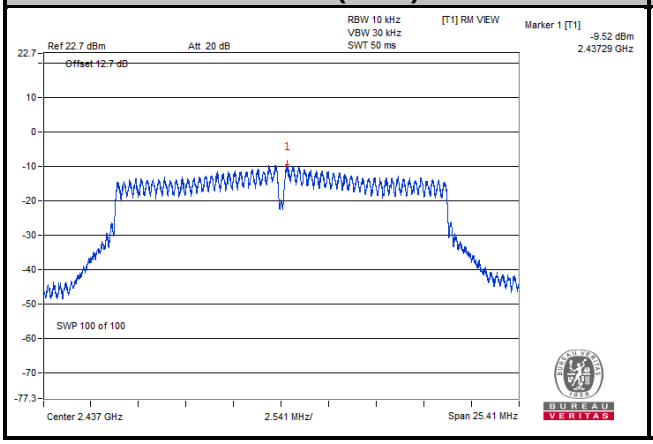
802.11b



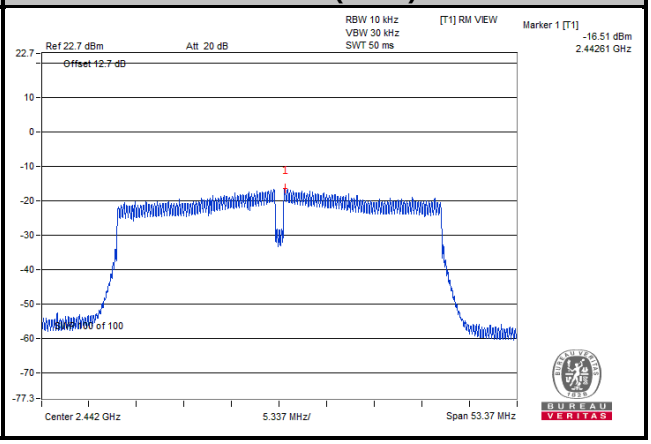
802.11g



802.11n (HT20)



802.11n (HT40)

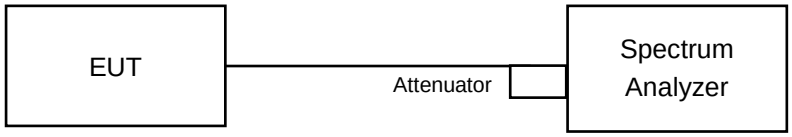


4.7 Conducted Out of Band Emission Measurement

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 ≥ 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 OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 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

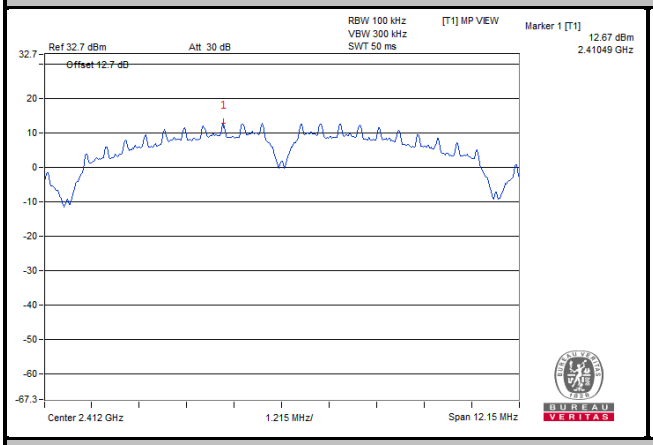
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

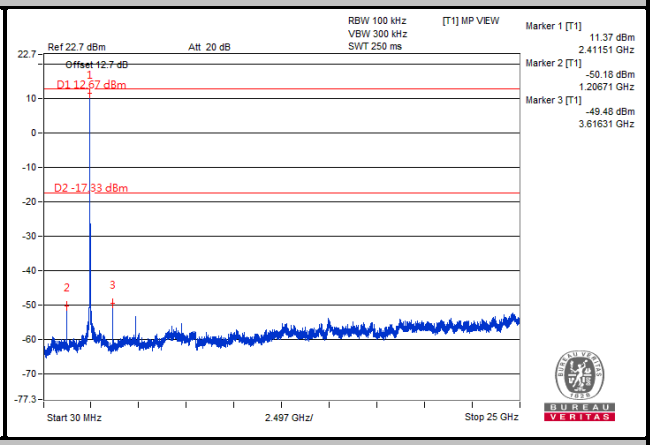
4.7.7 Test Results

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.

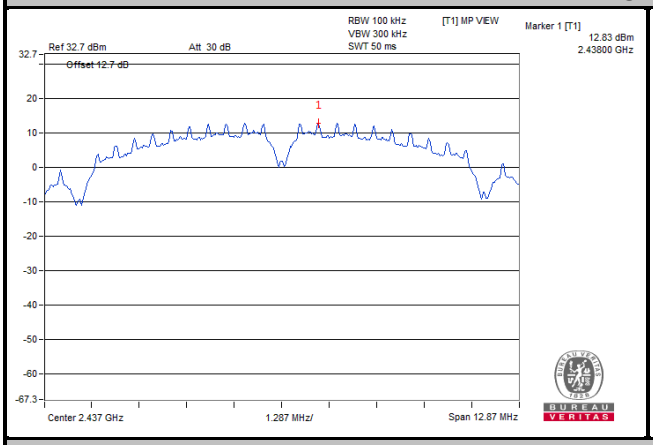
802.11b

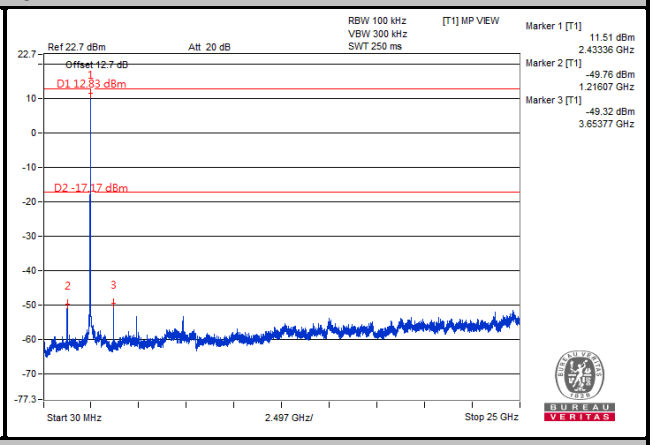
Ch 1



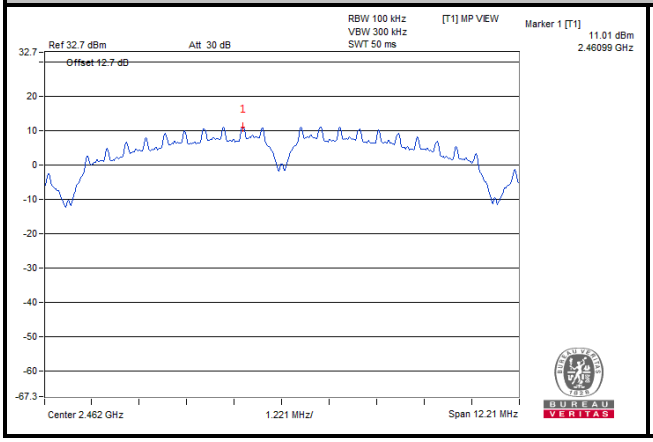


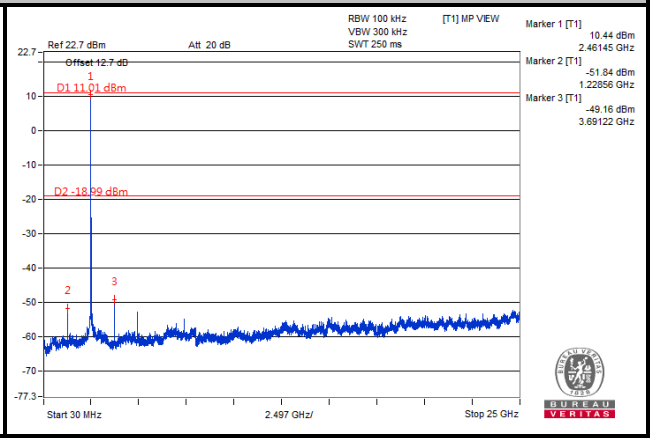
Ch 6



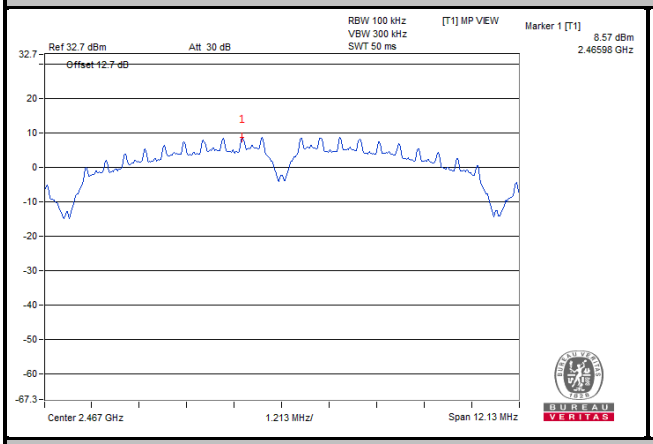


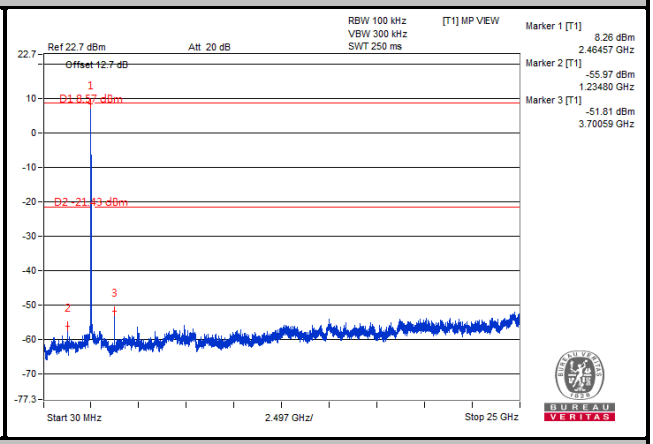
Ch 11



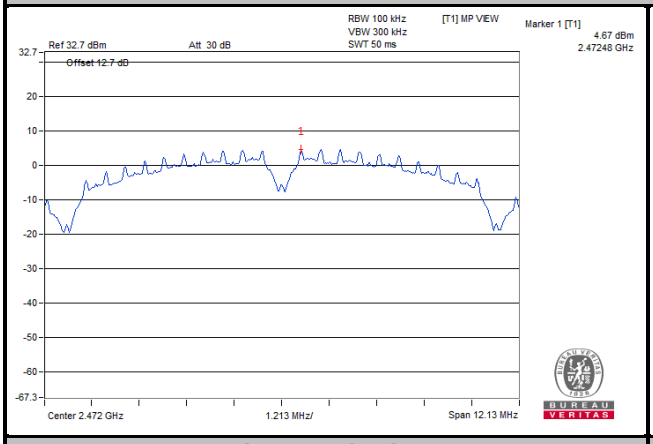


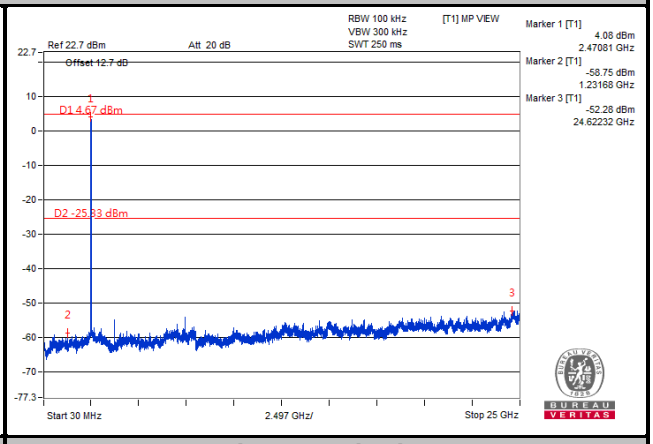
Ch 12



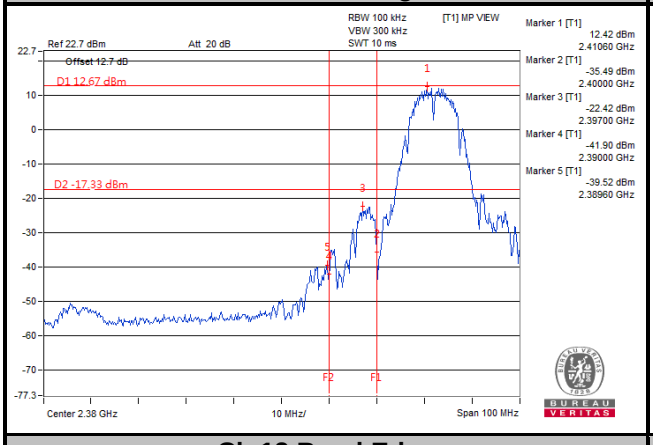


Ch 13

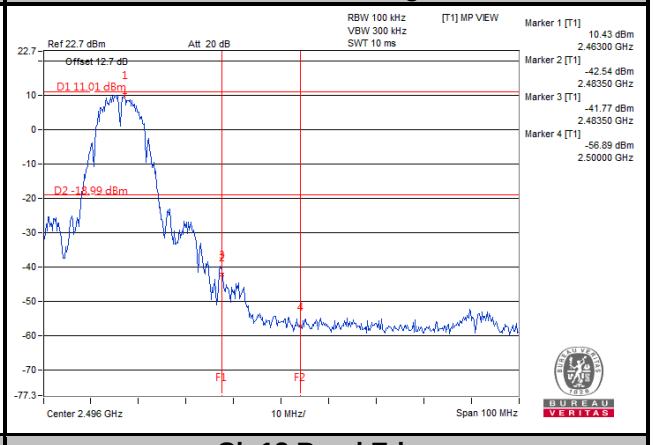




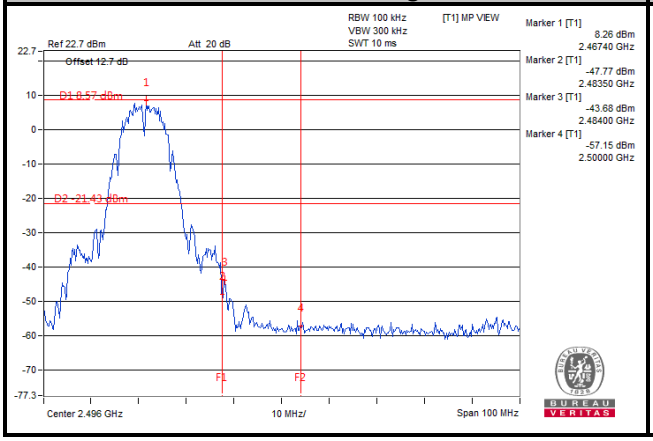
Ch 1 Band Edge



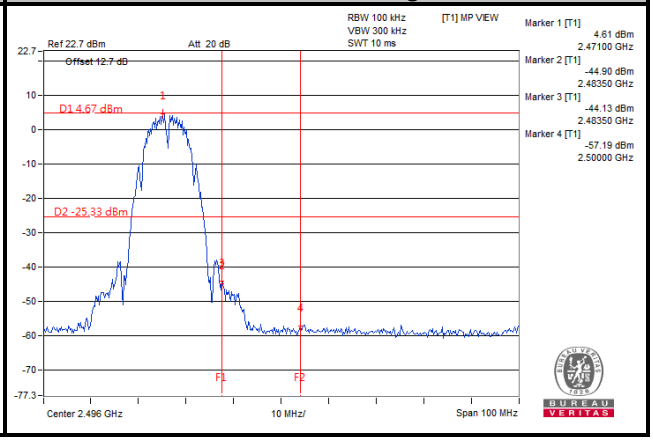
Ch 11 Band Edge



Ch 12 Band Edge

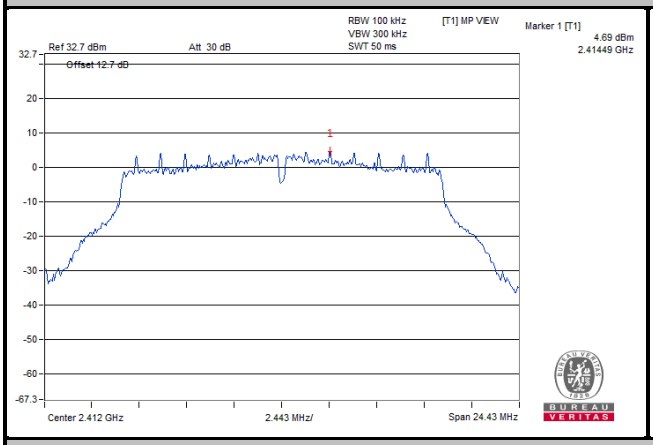


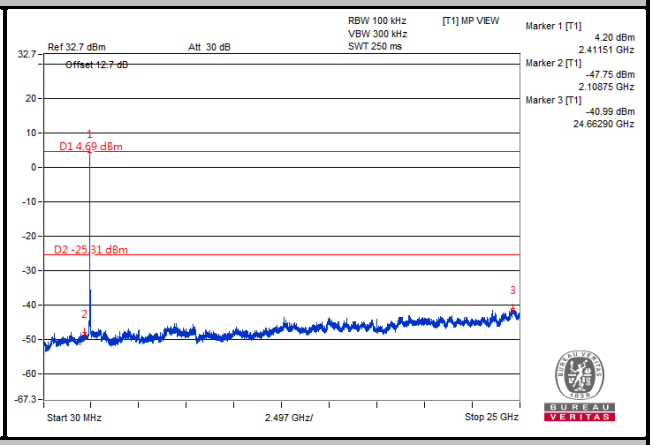
Ch 13 Band Edge



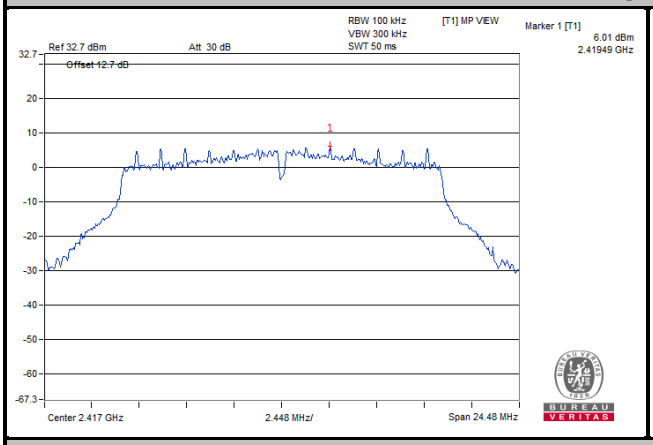
802.11g

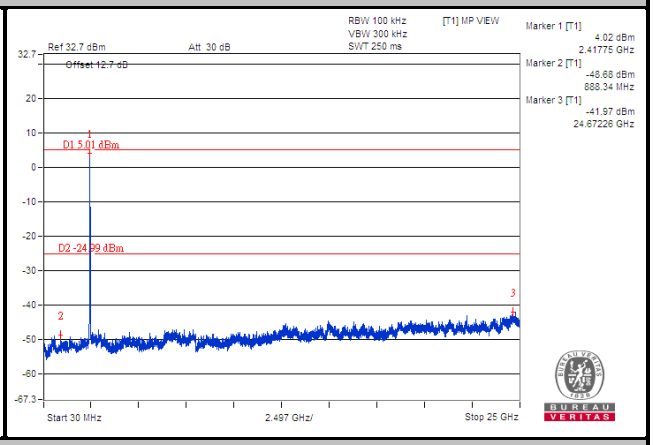
Ch 1



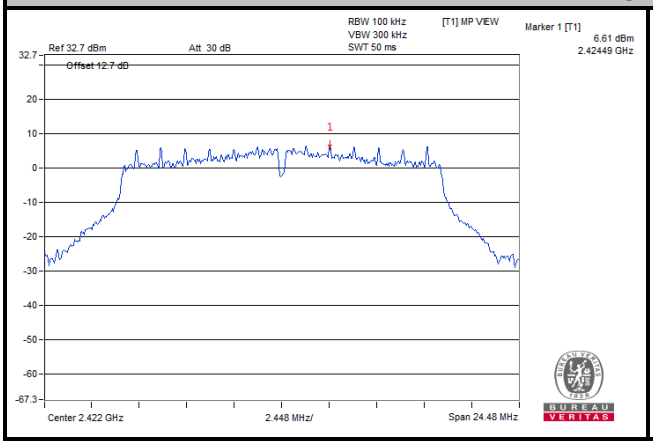


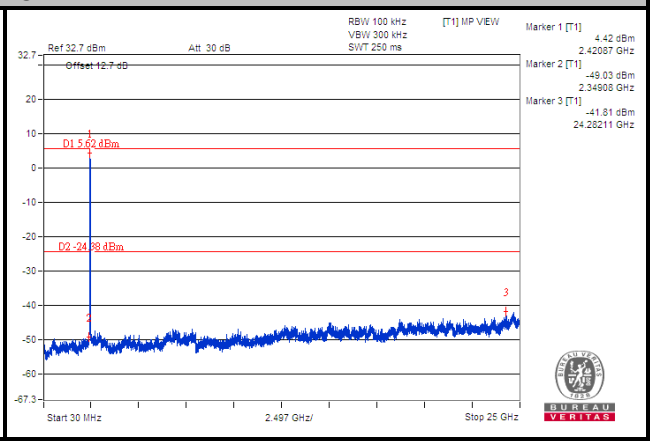
Ch 2



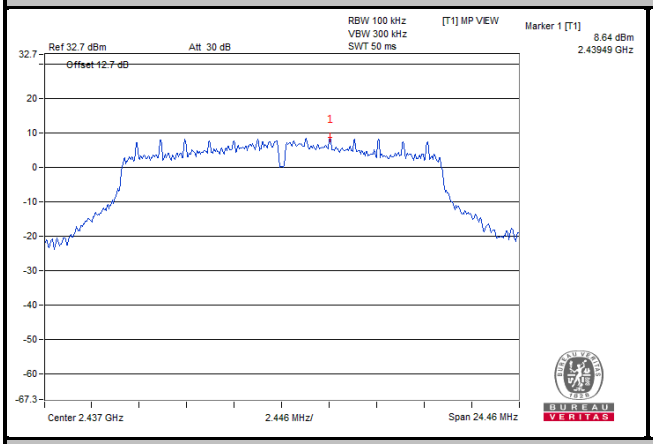


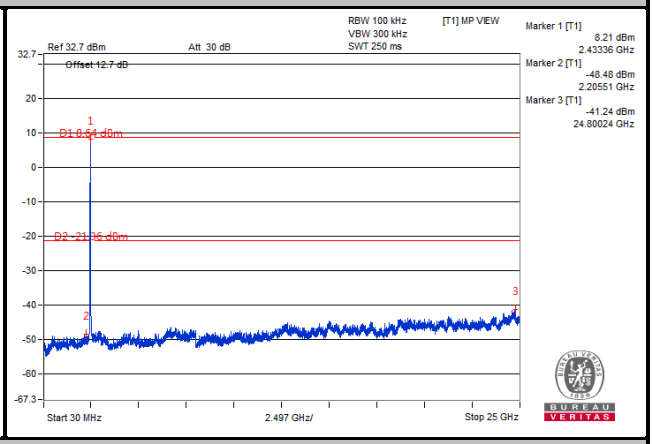
Ch 3



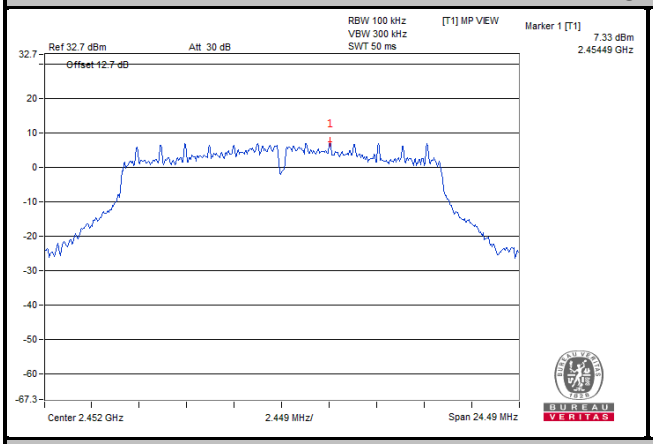


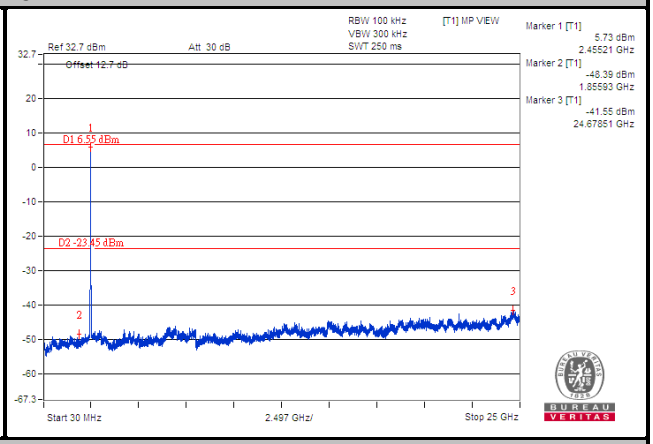
Ch 6



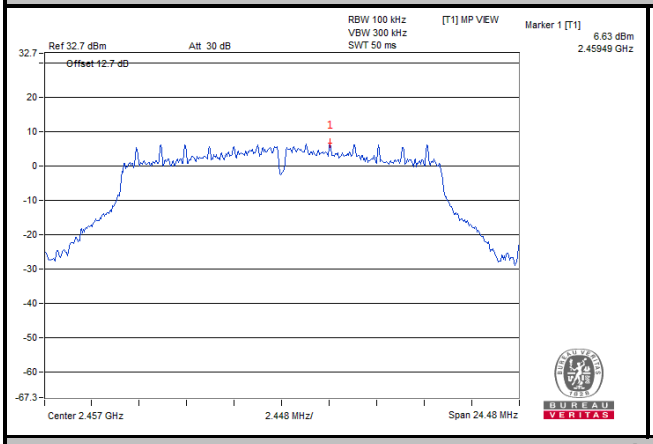


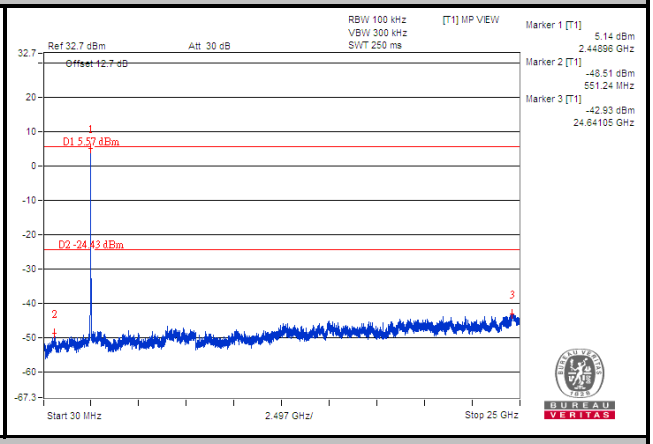
Ch 9



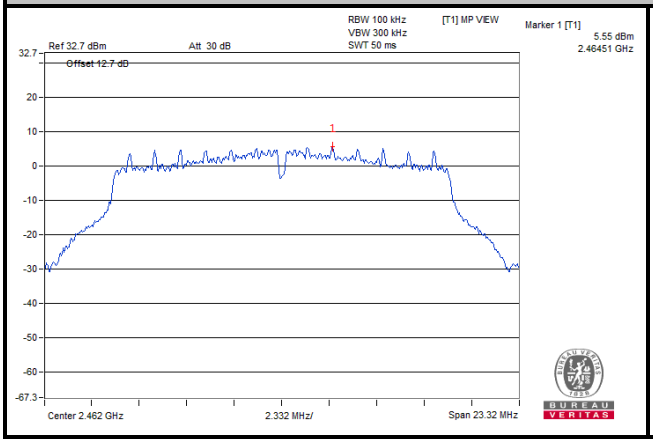


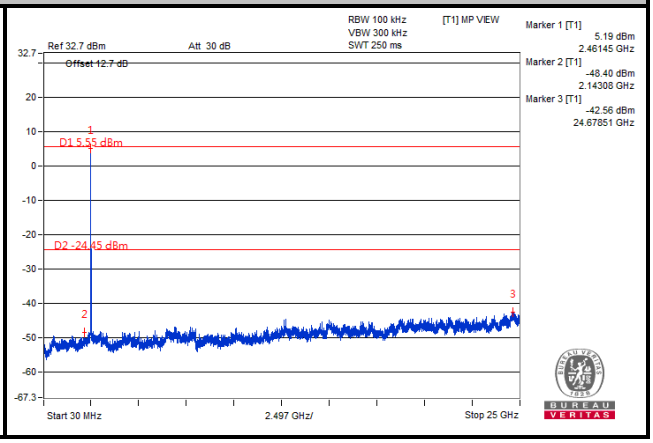
Ch 10



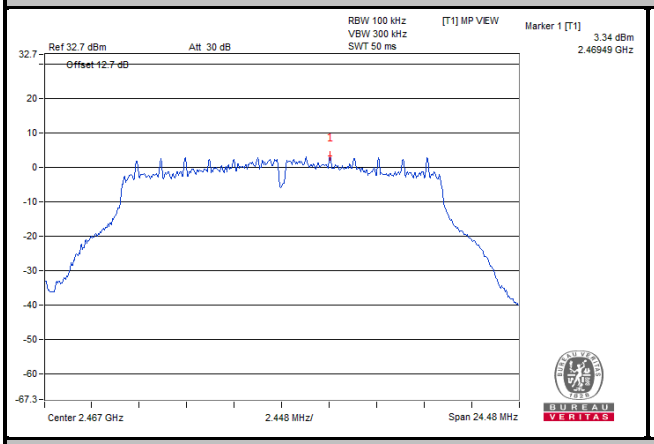


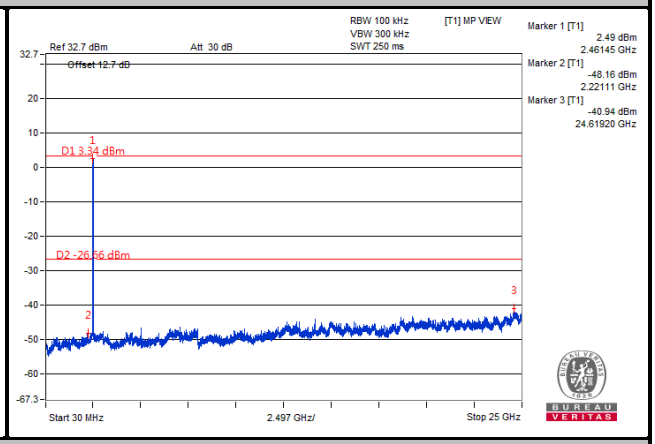
Ch 11



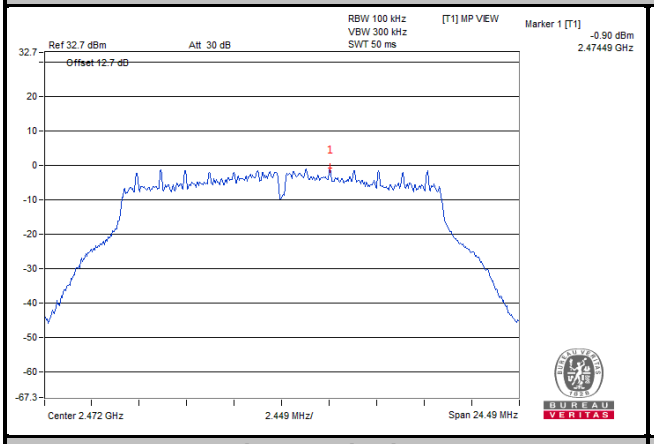


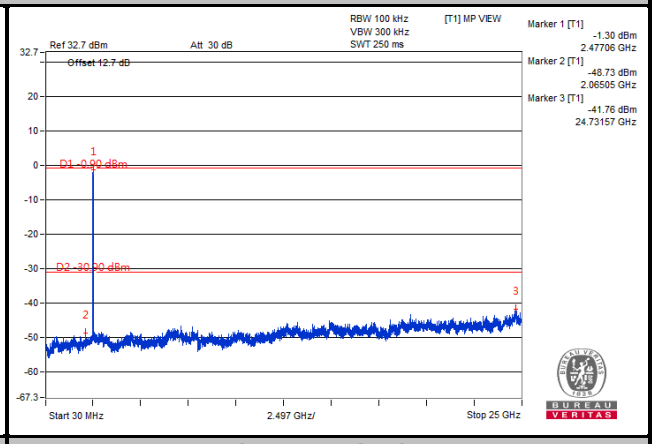
Ch 12



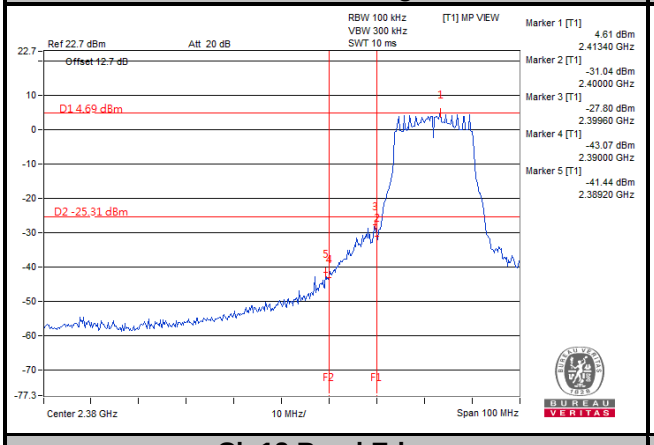


Ch 13

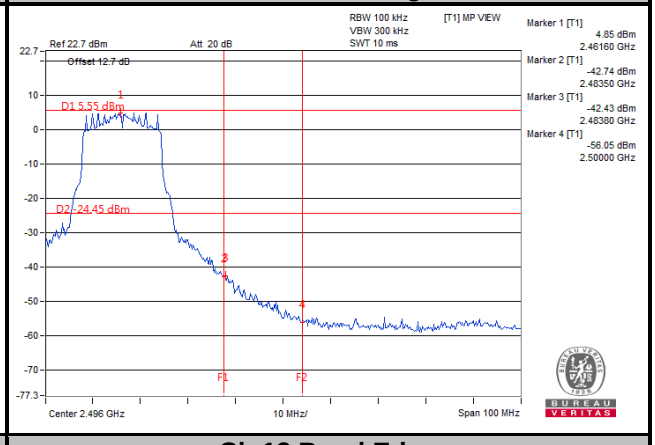




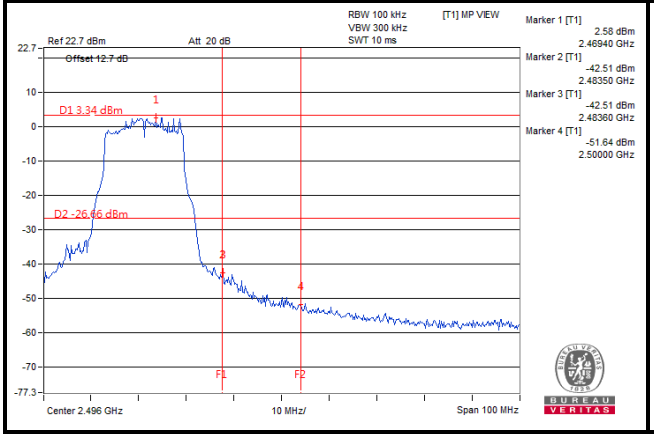
Ch 1 Band Edge



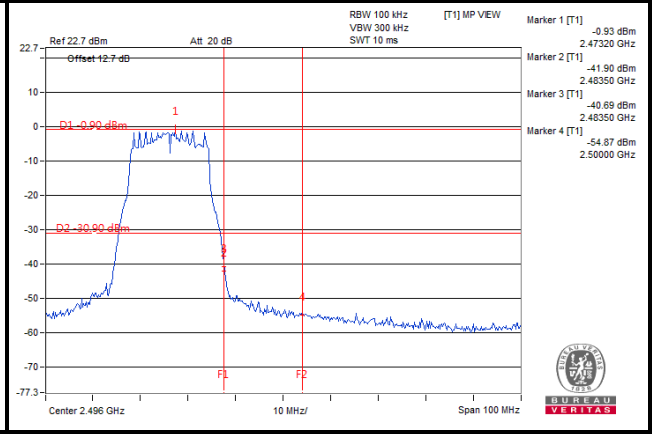
Ch 11 Band Edge



Ch 12 Band Edge

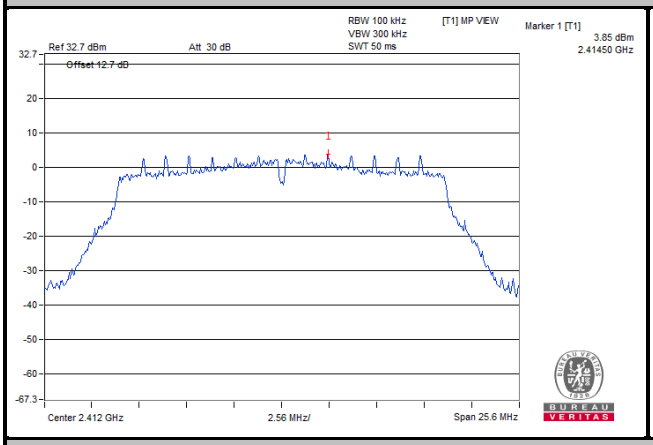


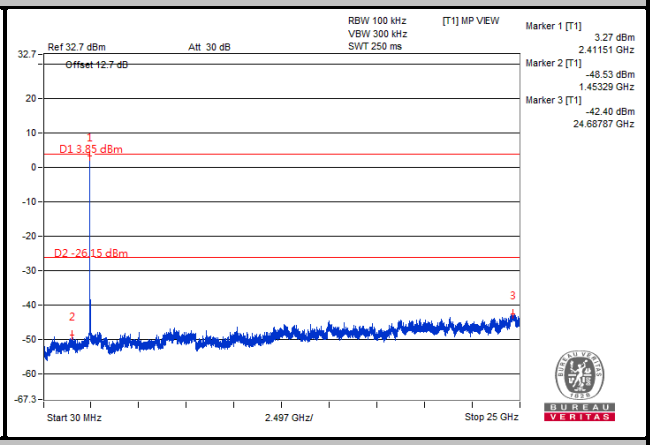
Ch 13 Band Edge



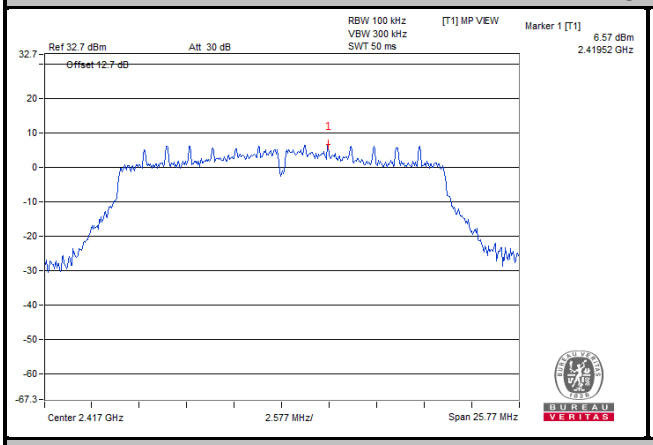
802.11n (HT20)

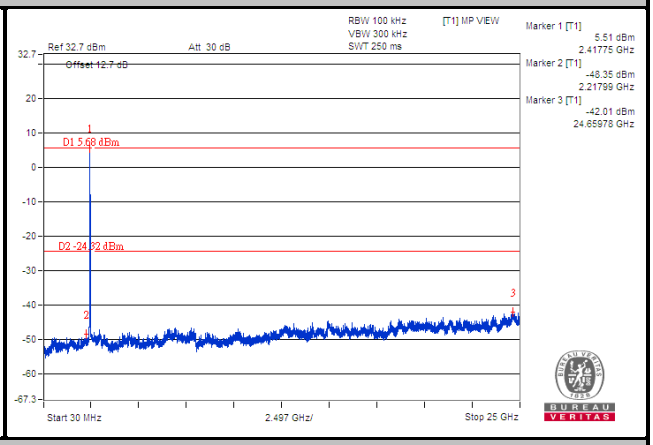
Ch 1



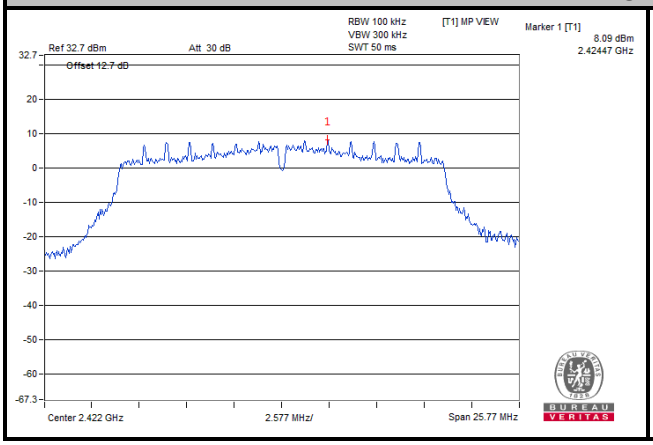


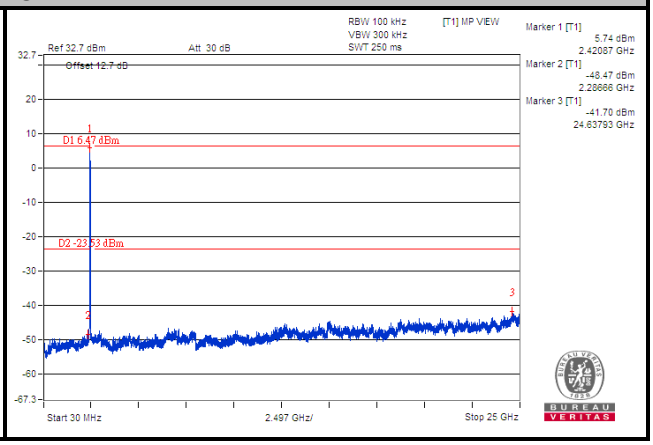
Ch 2





Ch 3





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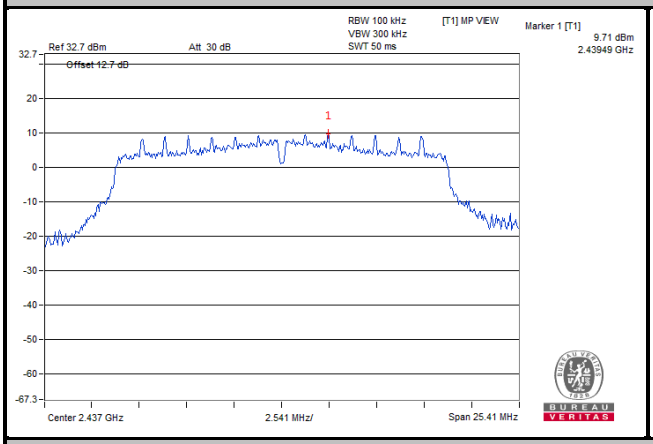

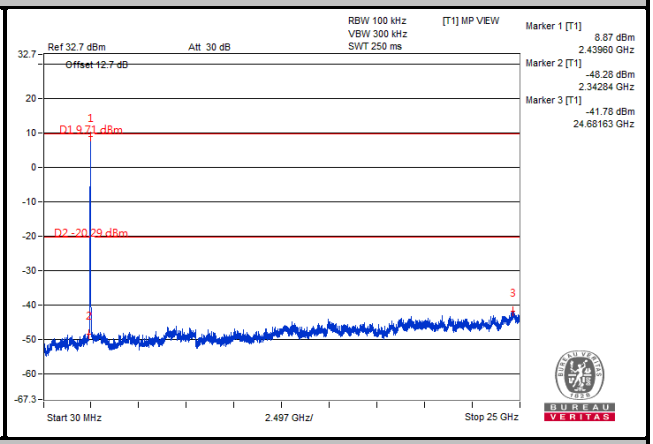

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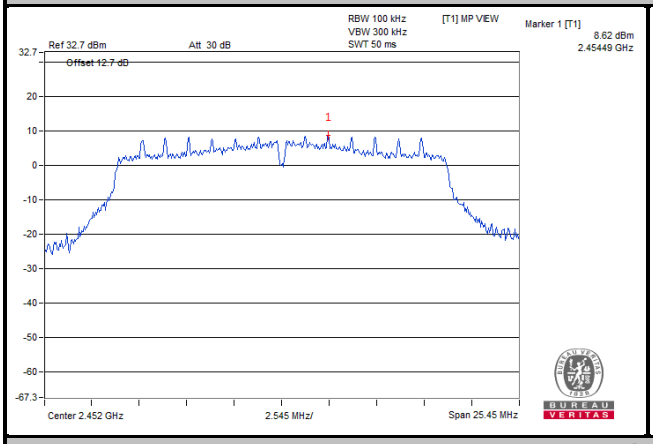

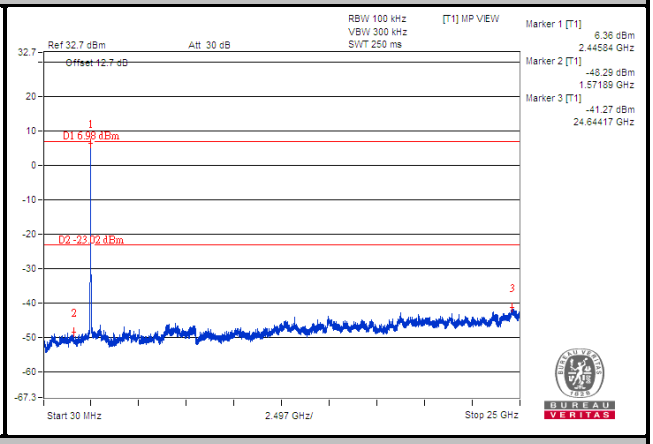

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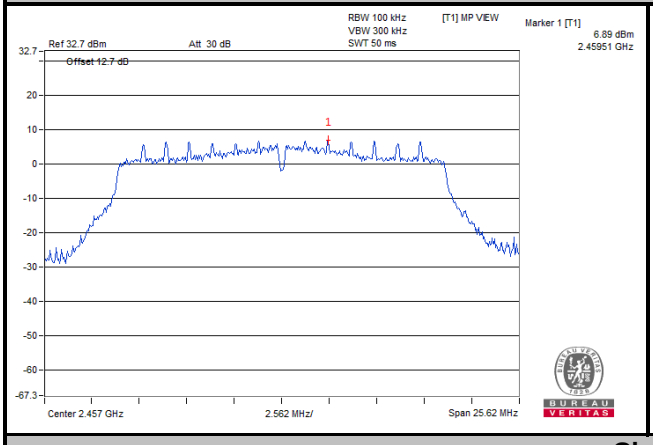

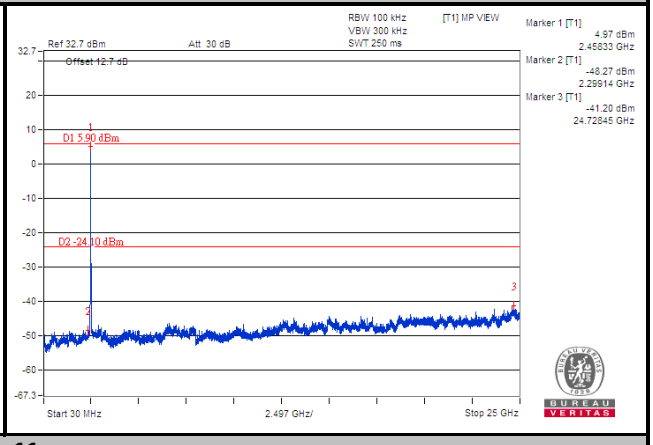

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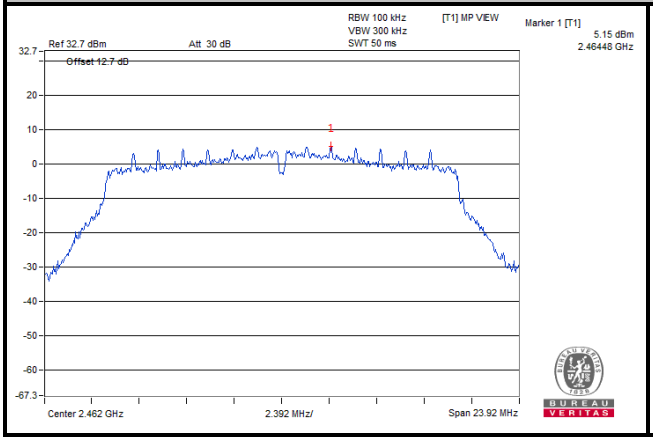

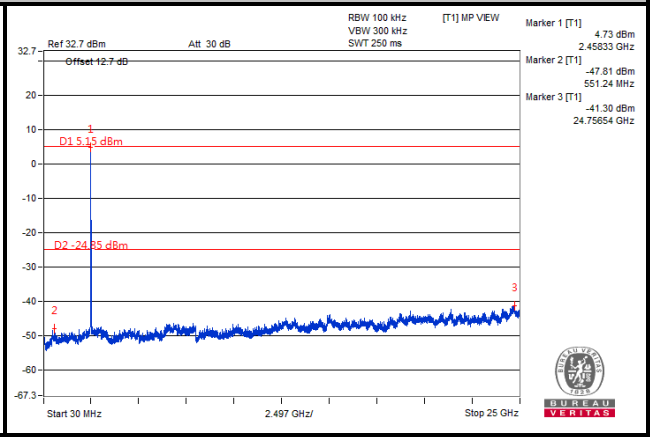

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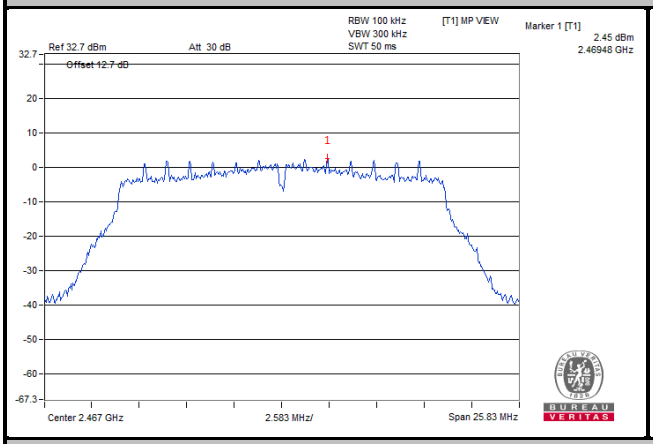

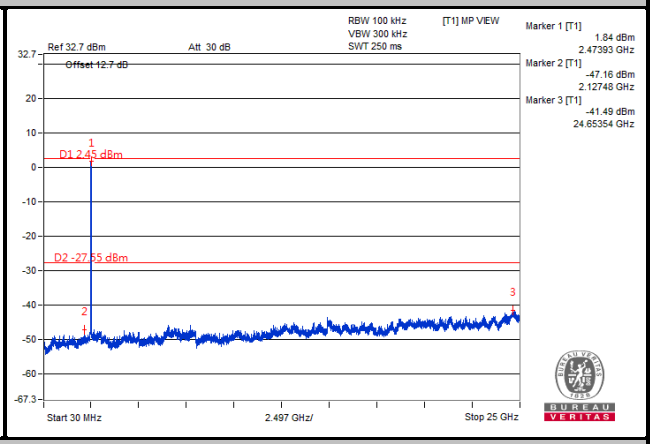

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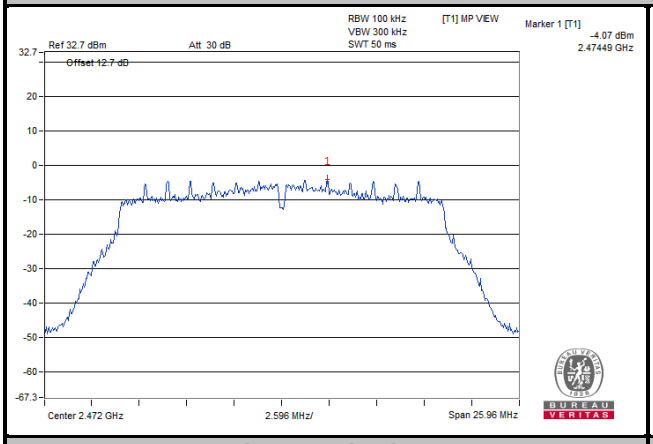
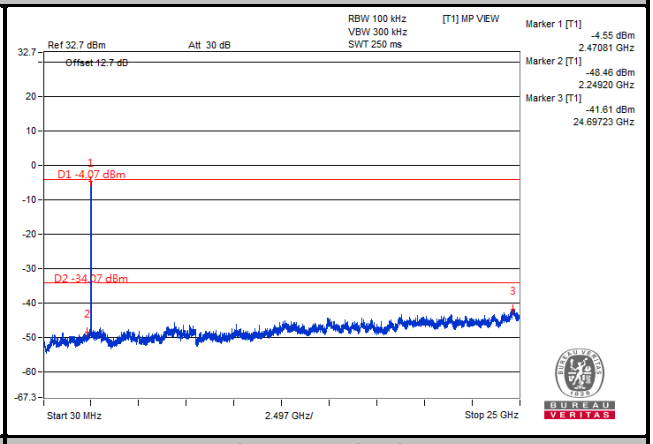
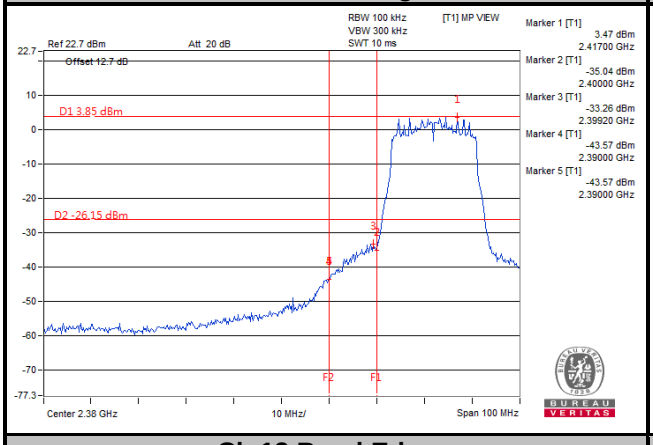
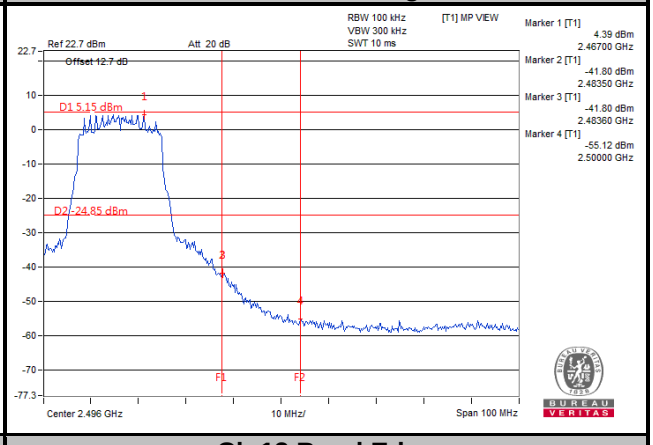




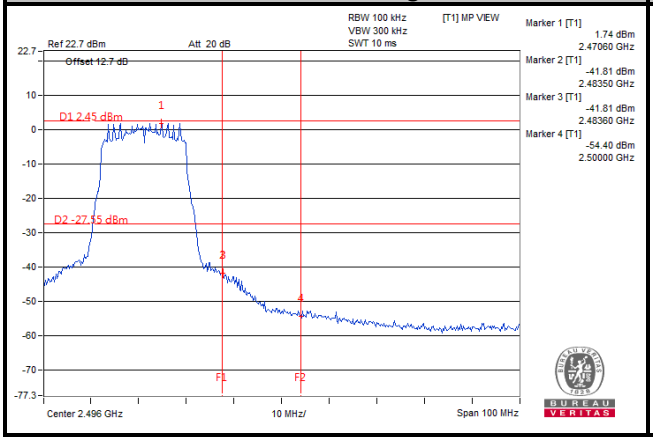
Ch 1 Band Edge



Ch 11 Band Edge



Ch 12 Band Edge



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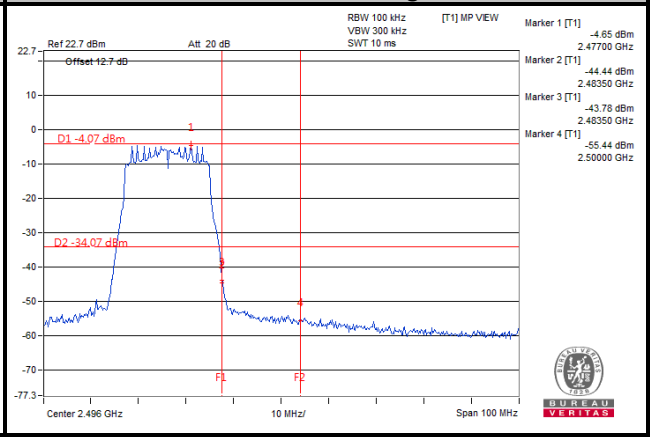
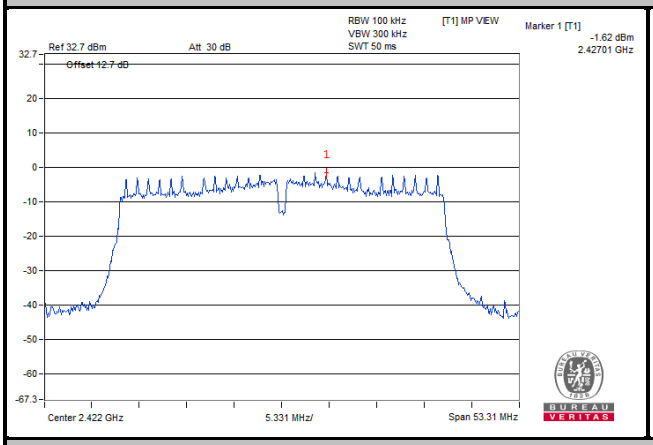
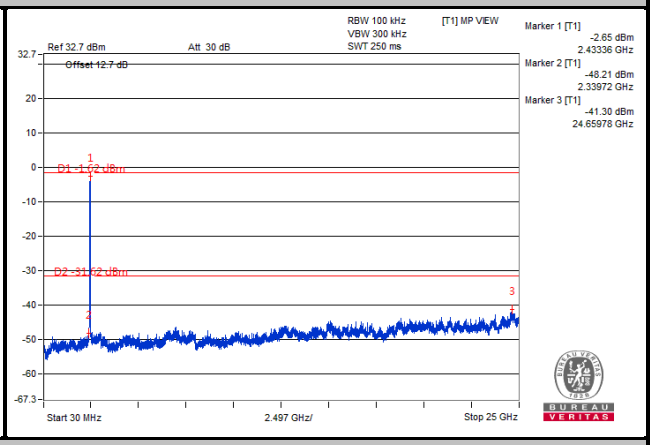


802.11n (HT40)

Ch 3





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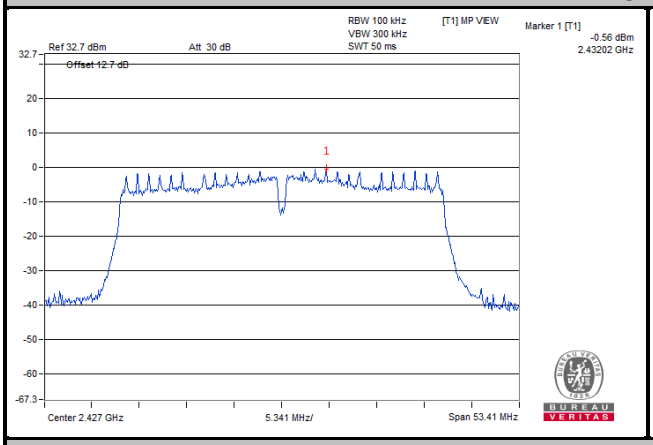
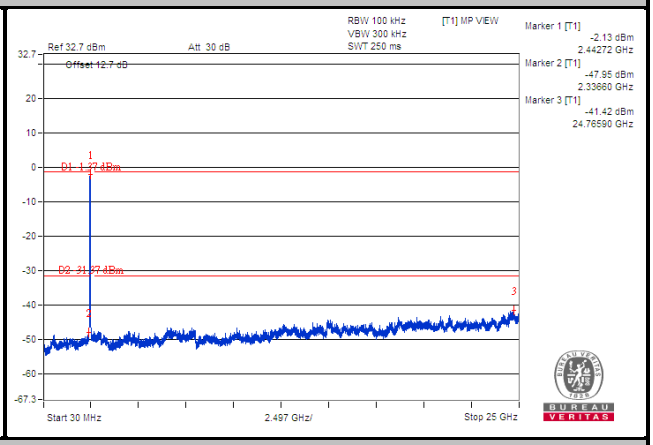
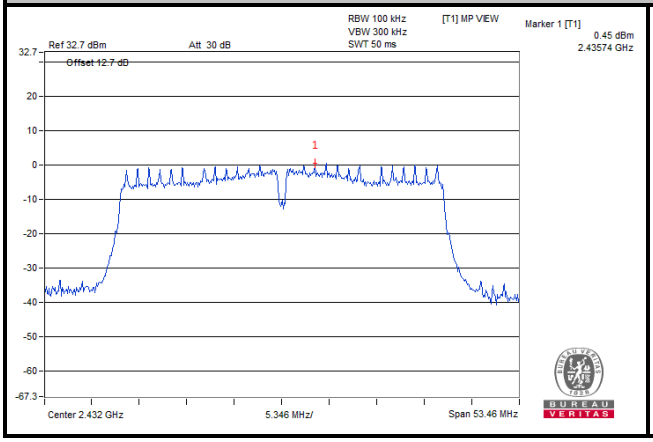
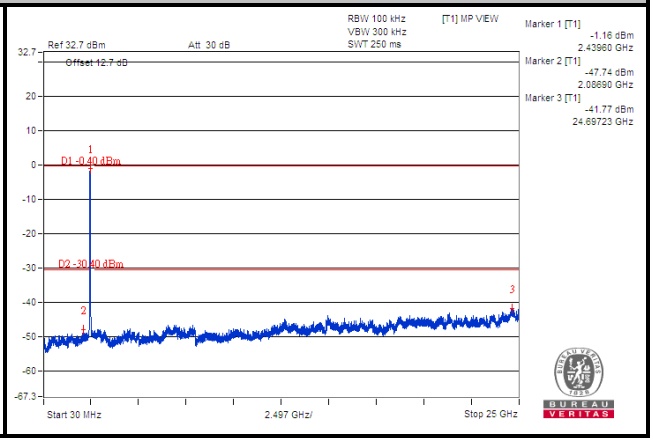


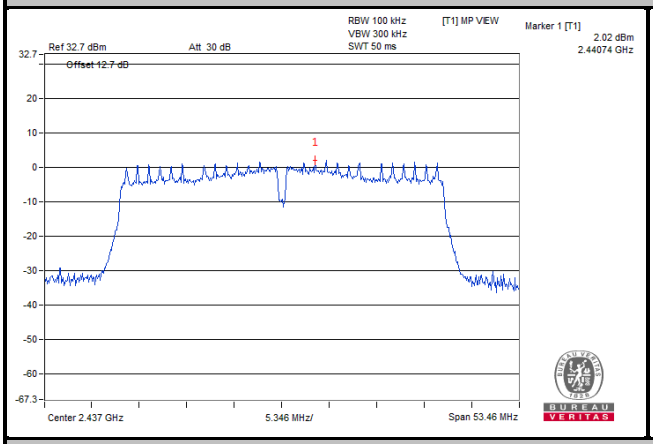


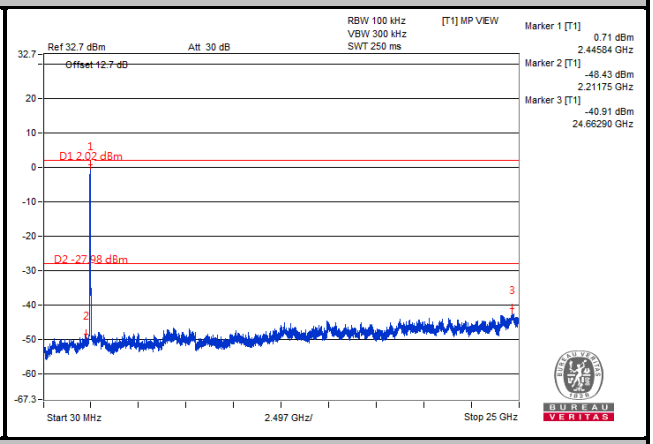
Ch 5



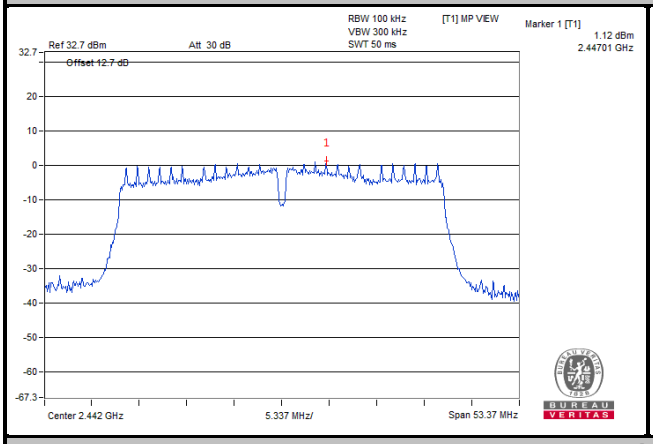


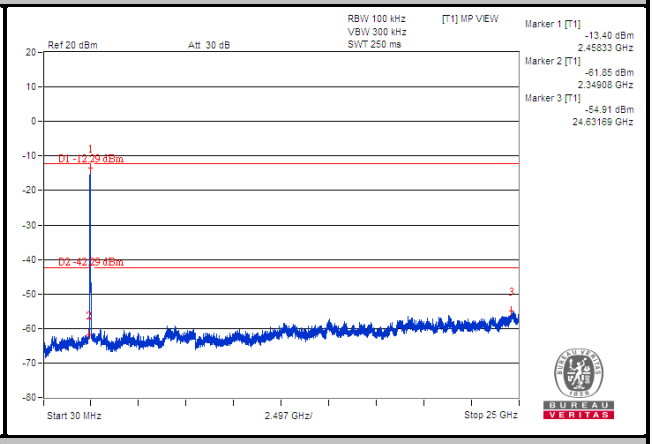
Ch 6



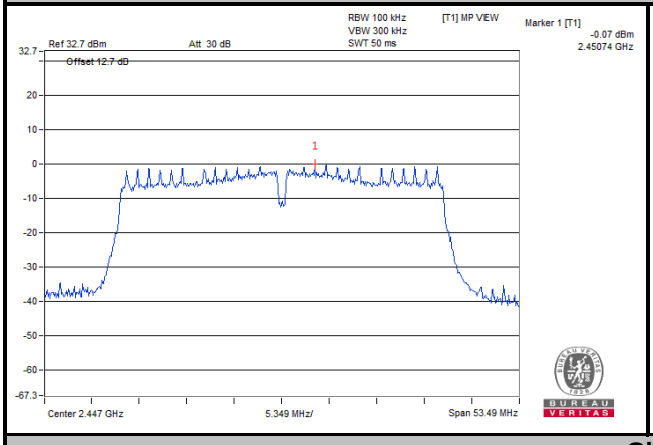


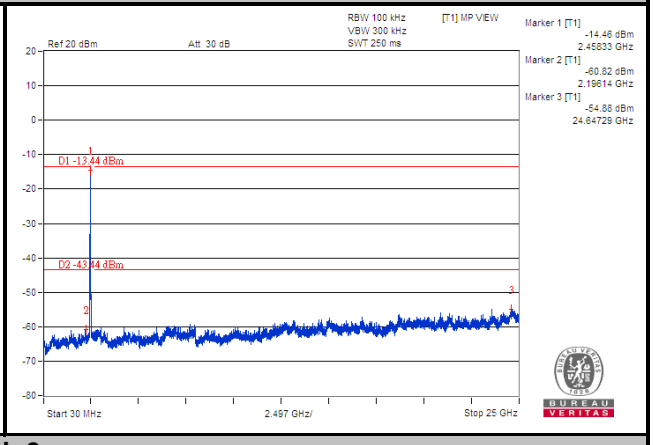
Ch 7



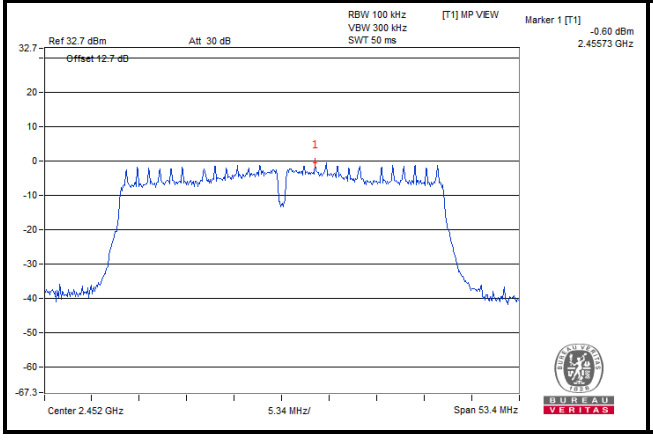


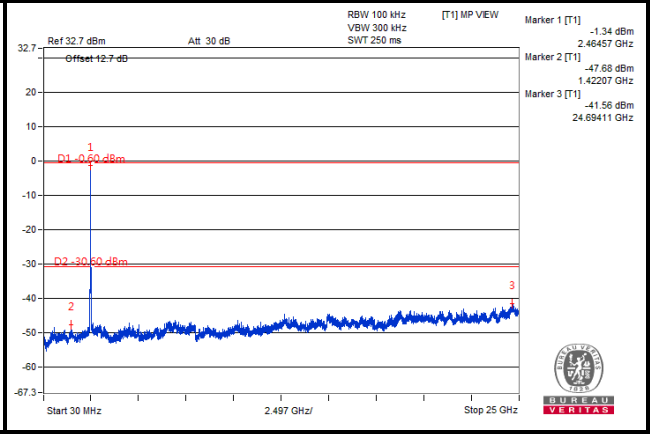
Ch 8



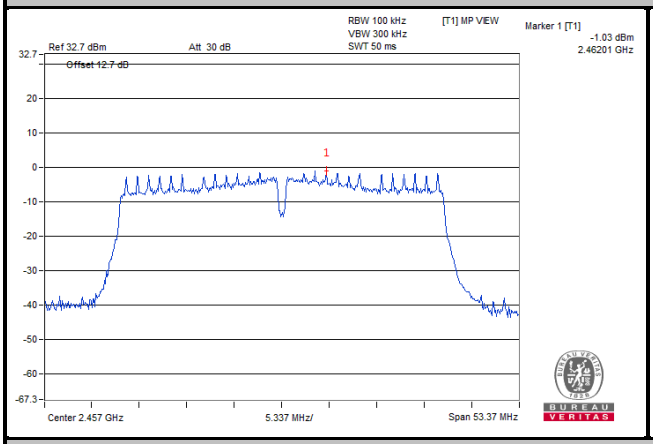


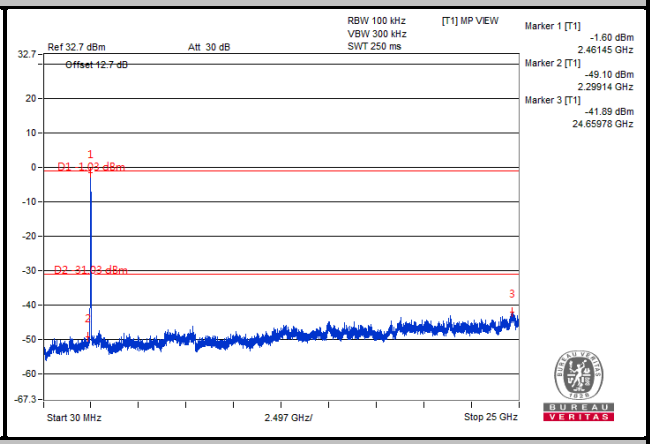
Ch 9



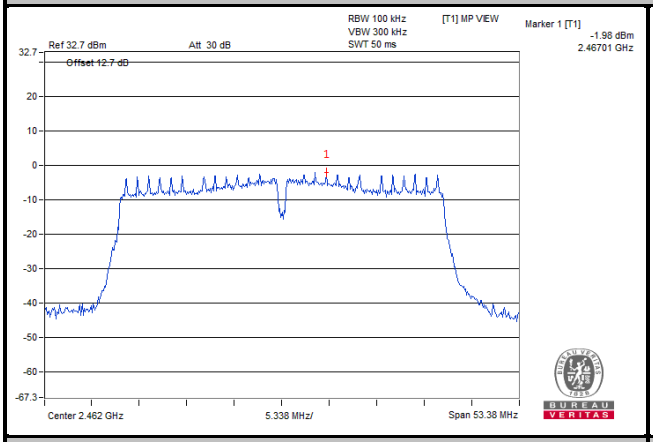


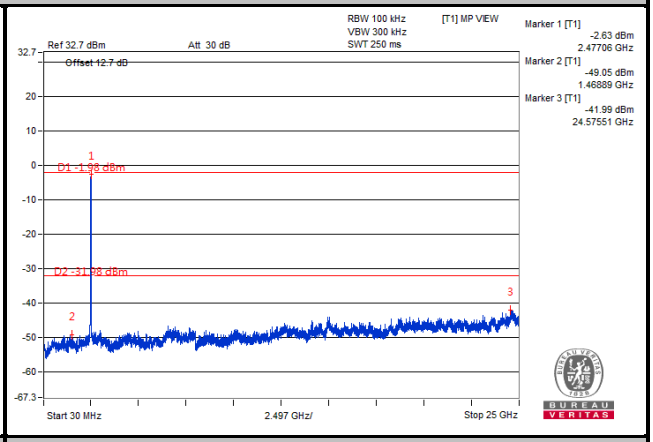
Ch 10



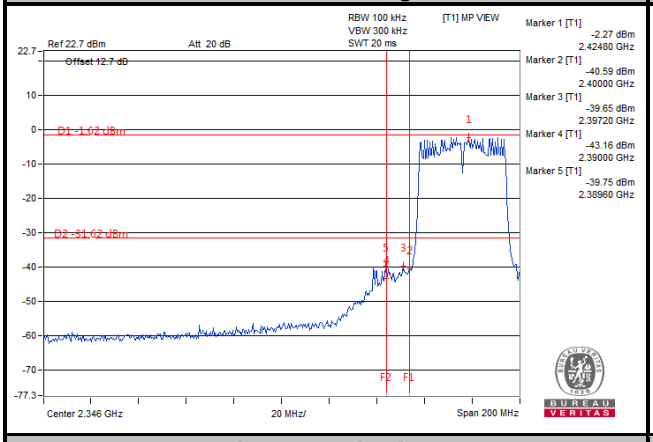


Ch 11

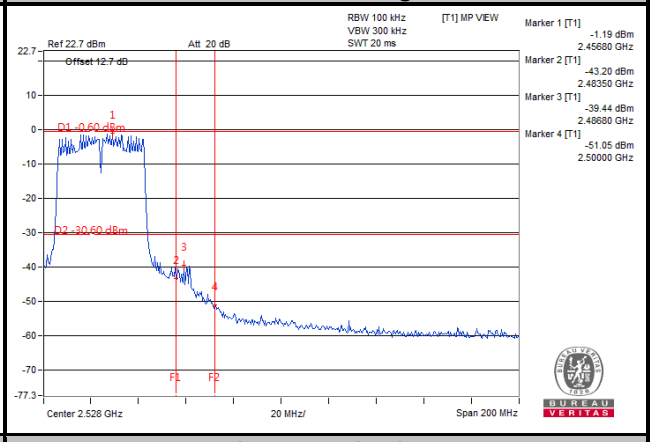




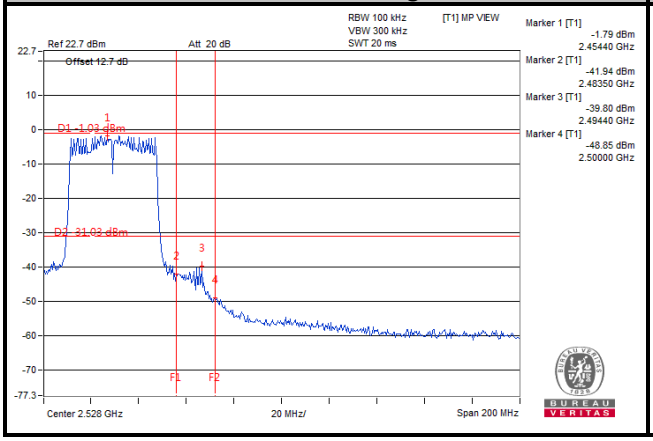
Ch 3 Band Edge



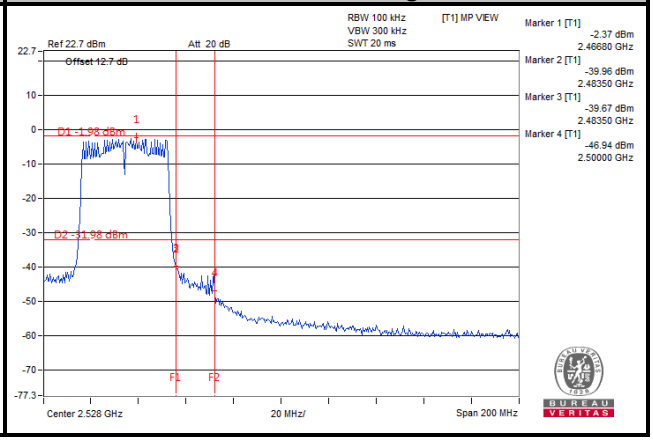
Ch 9 Band Edge



Ch 10 Band Edge



Ch 11 Band Edge

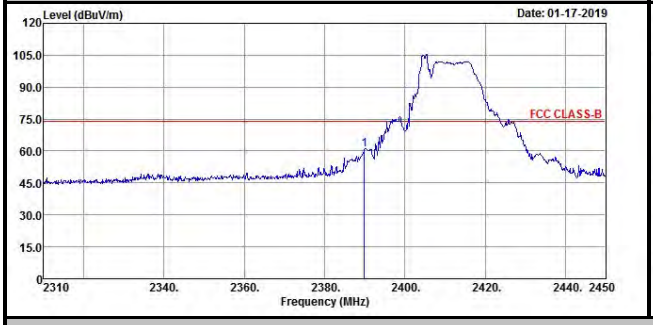
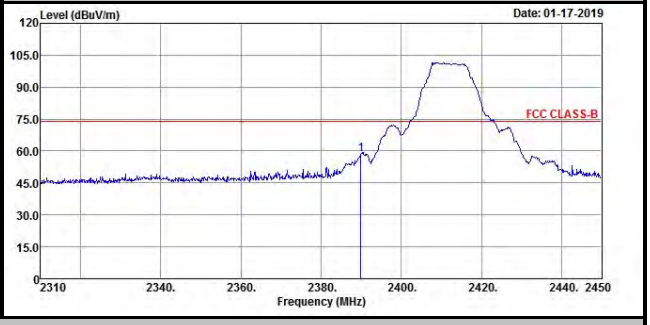
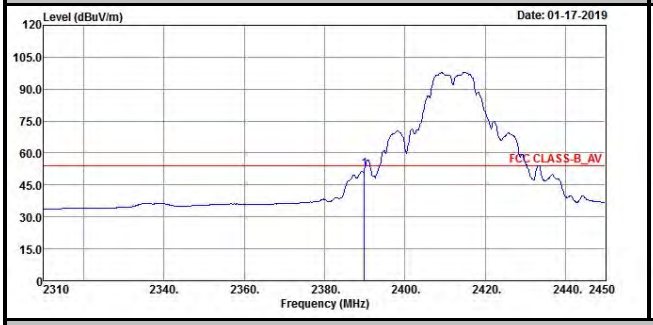
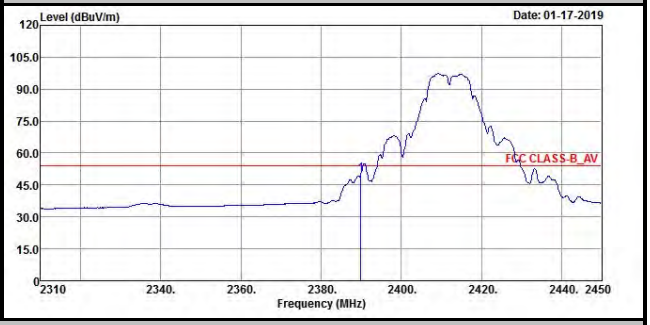
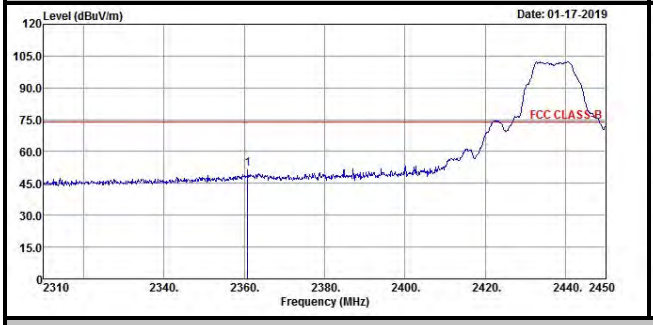
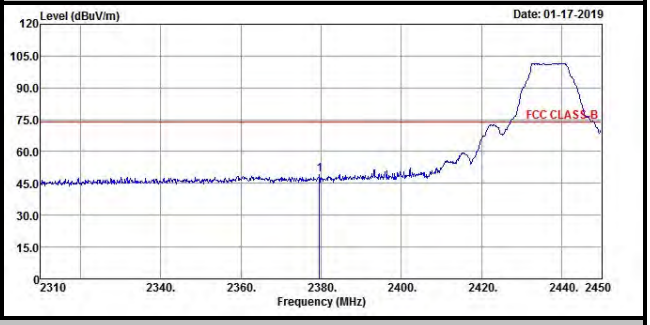


5 Pictures of Test Arrangements

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

Annex A- Band-edge measurement

802.11b

Ch 1	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	
Ch 6	
Peak	
Horizontal	Vertical
	
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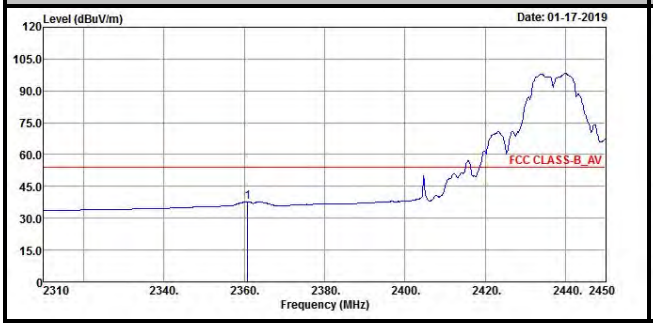
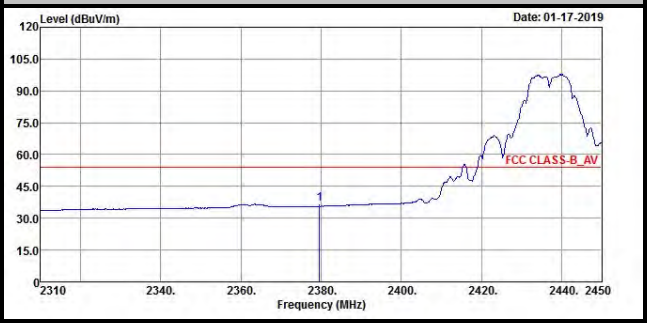
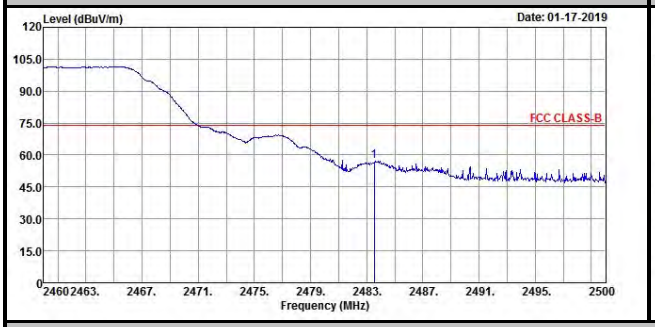
Horizontal	Vertical
	

Ch 11

Peak

Horizontal



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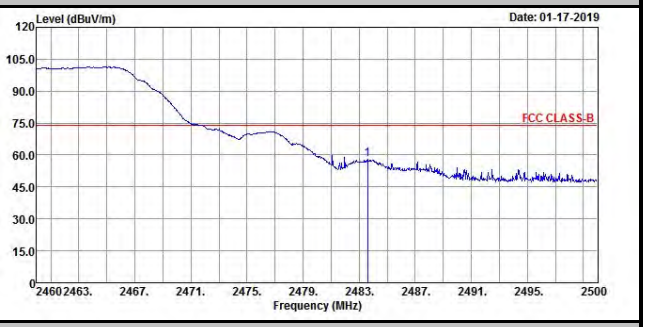
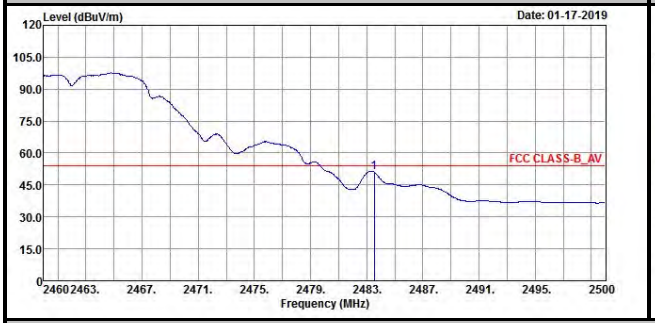


Average

Horizontal



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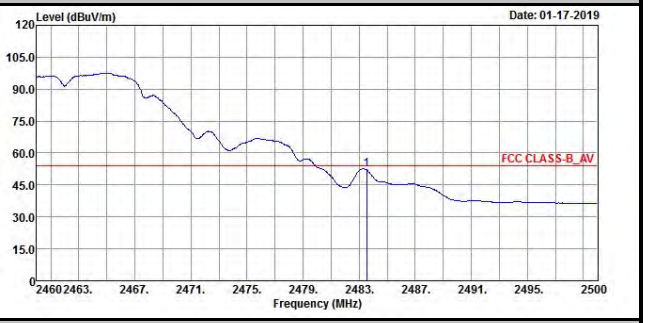
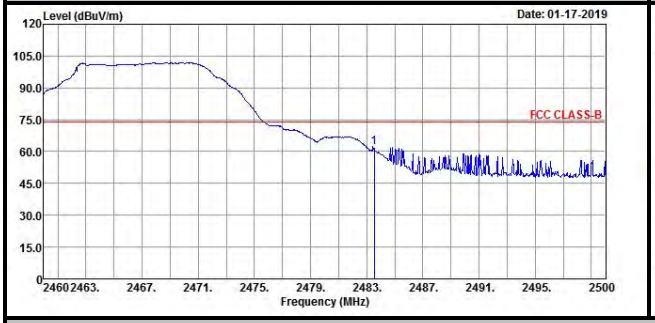


Ch 12

Peak

Horizontal



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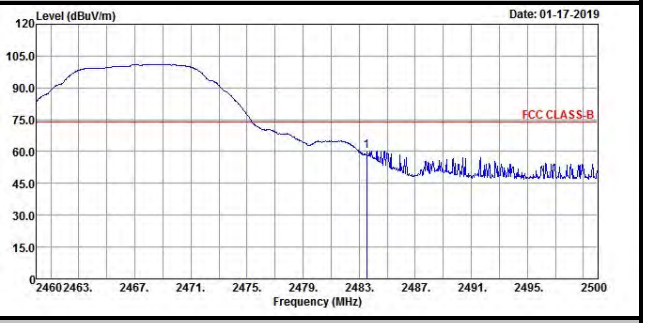
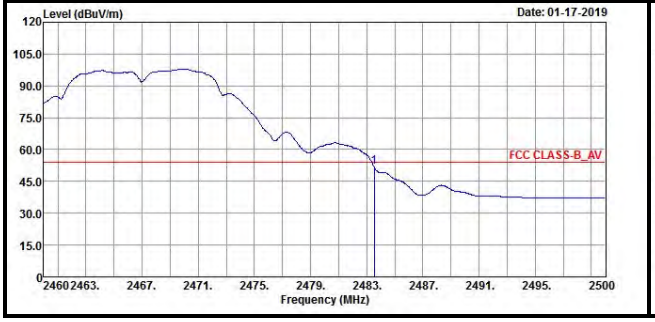
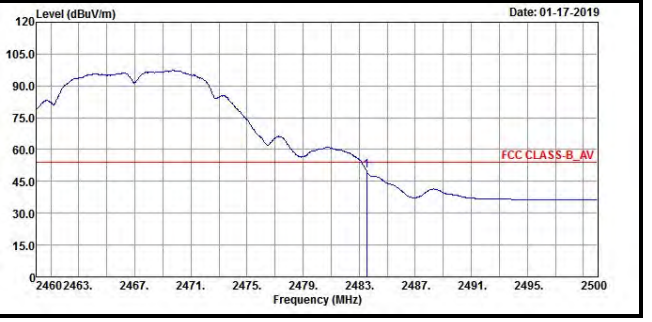


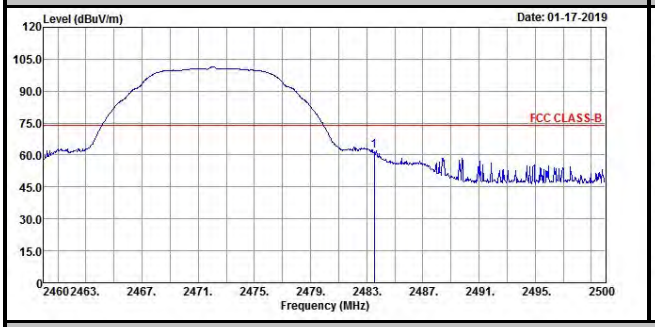
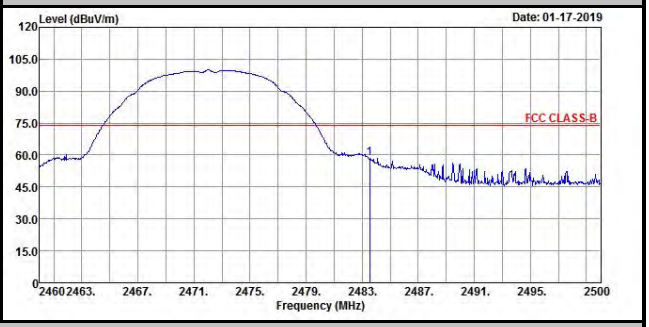
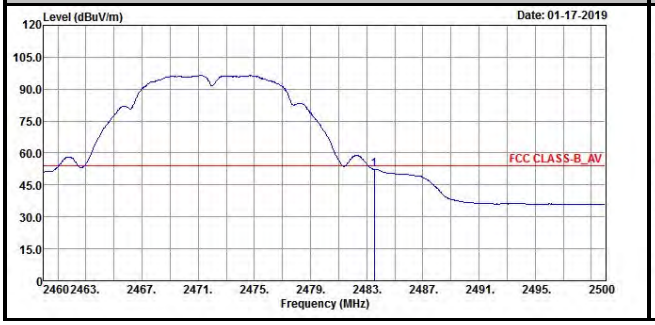
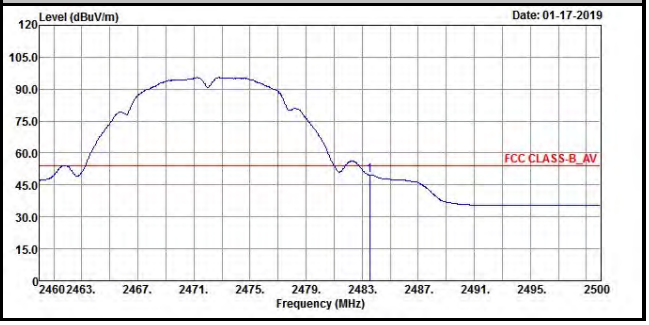
Average

Horizontal

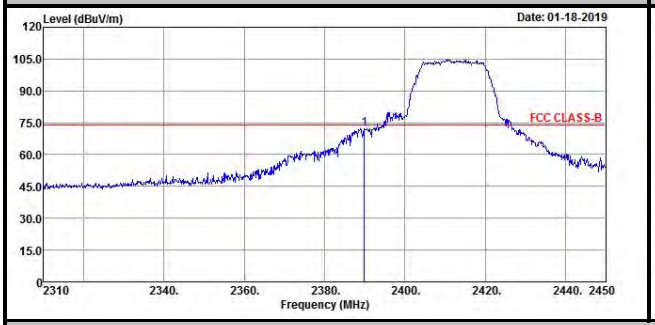
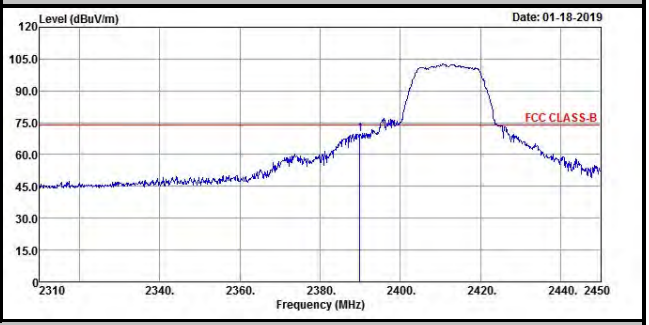
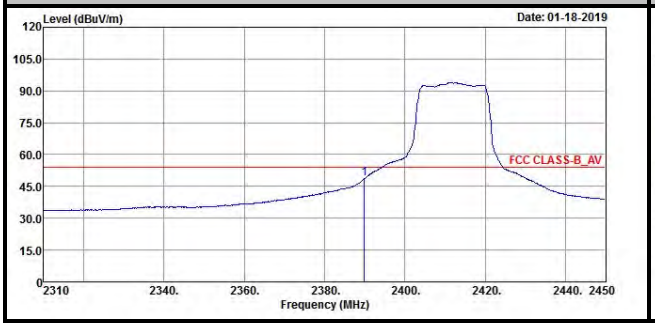
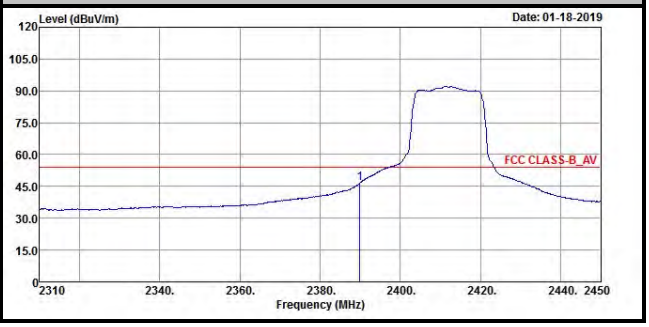


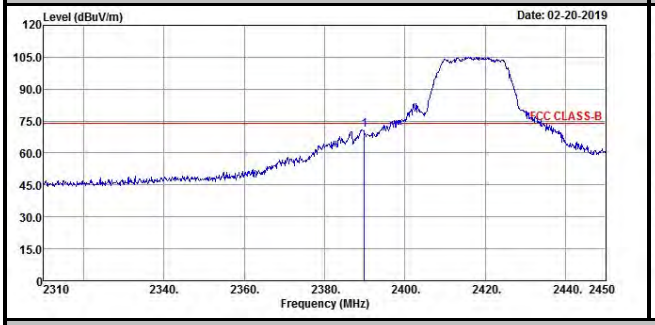
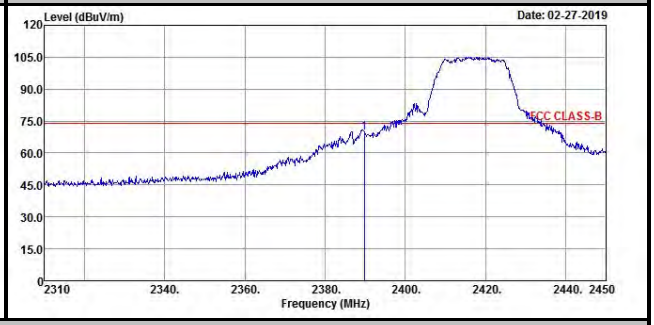
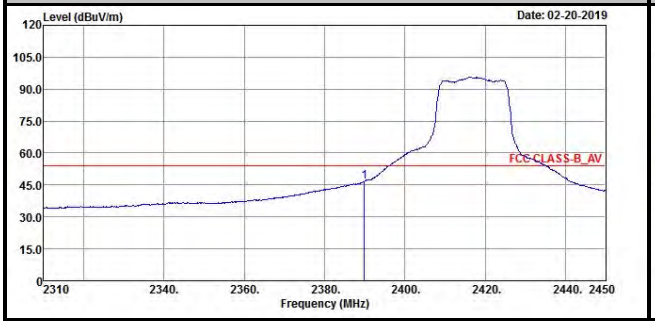
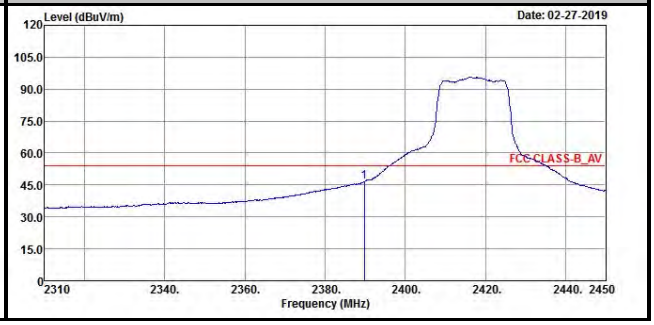
Vertical

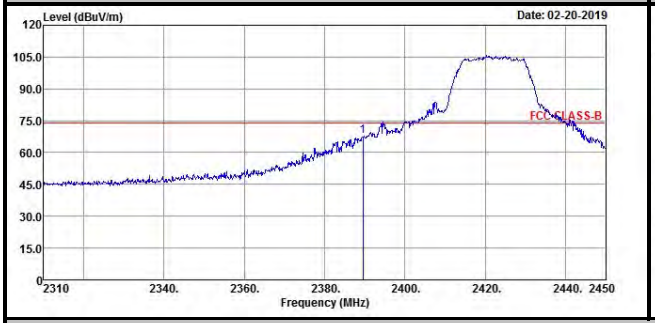
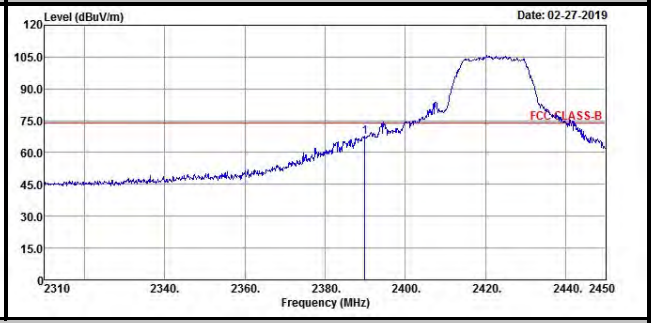
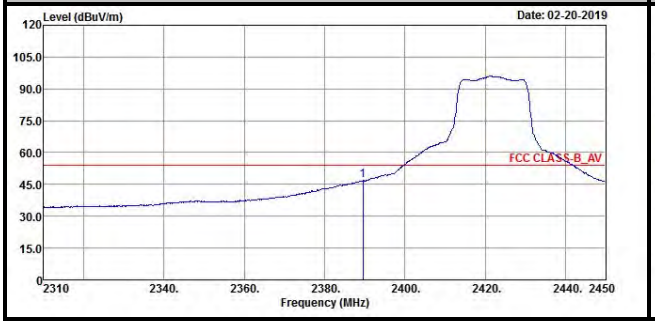
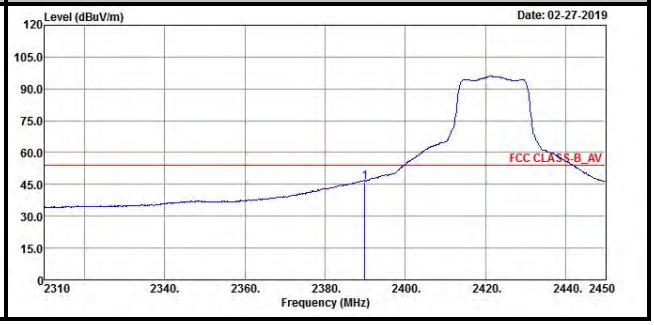


Ch 13	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

802.11g

Ch 1	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

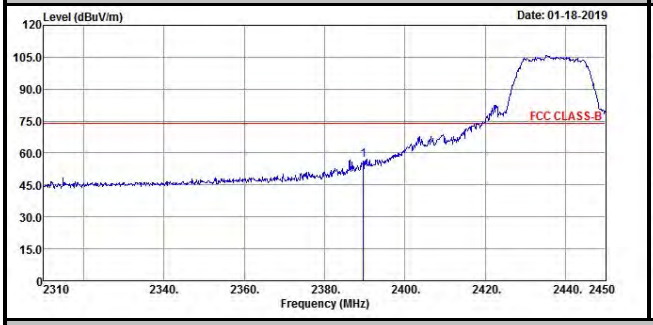
Ch 2	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

Ch 3	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

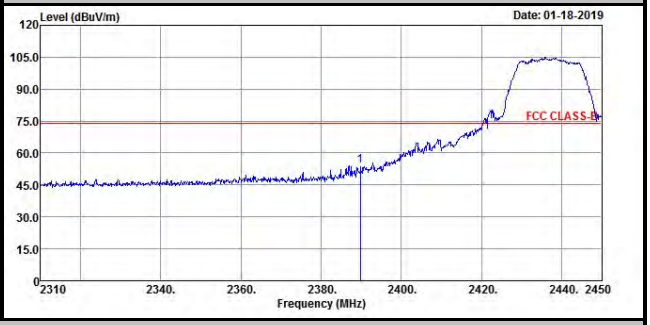
Ch 6

Peak

Horizontal

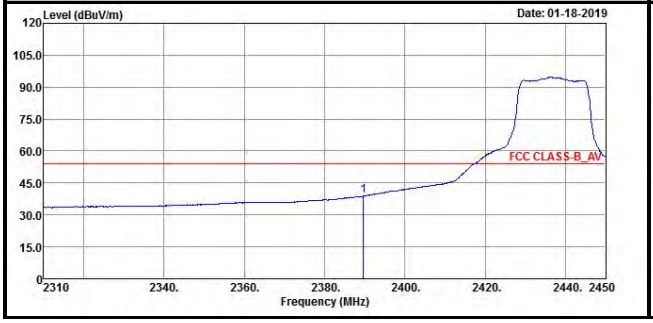


Vertical

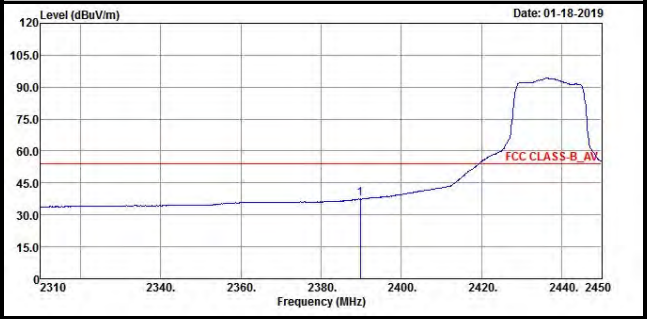


Average

Horizontal



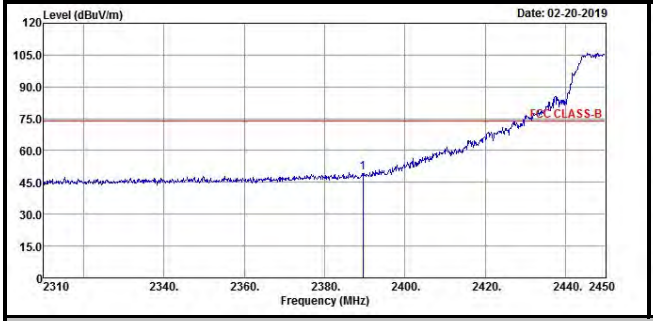
Vertical



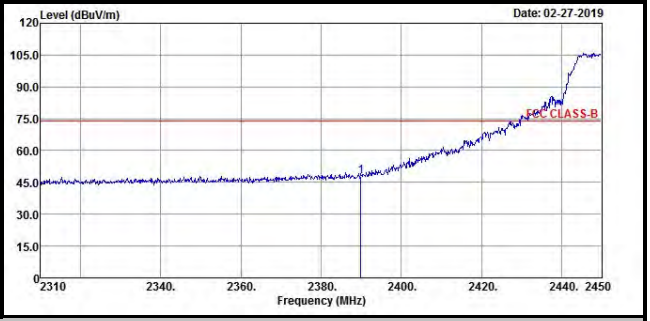
Ch 9

Peak

Horizontal

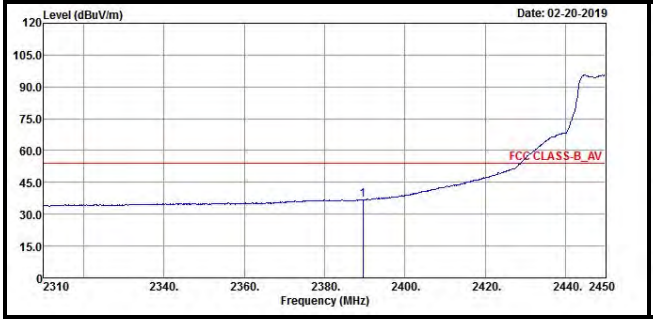


Vertical

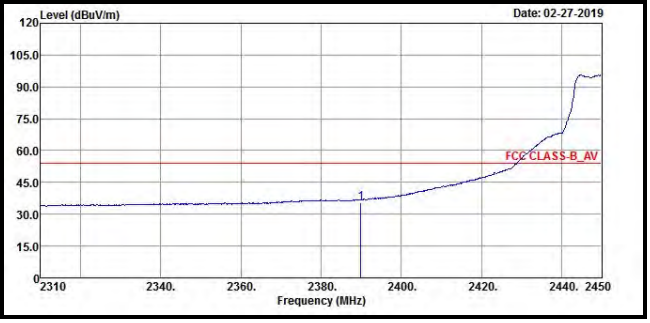


Average

Horizontal



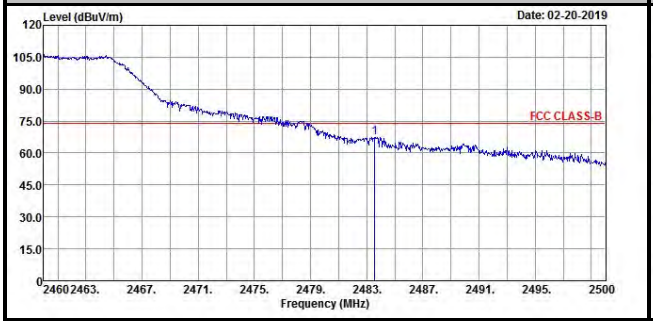
Vertical



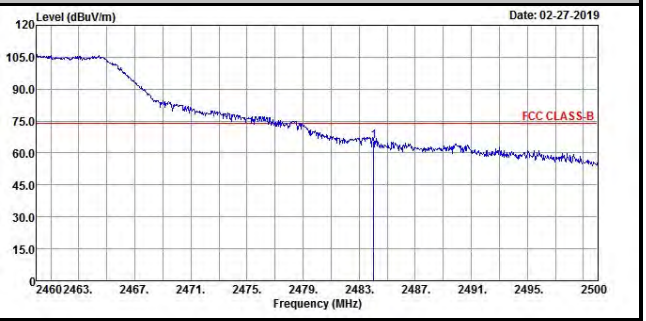
Ch 10

Peak

Horizontal

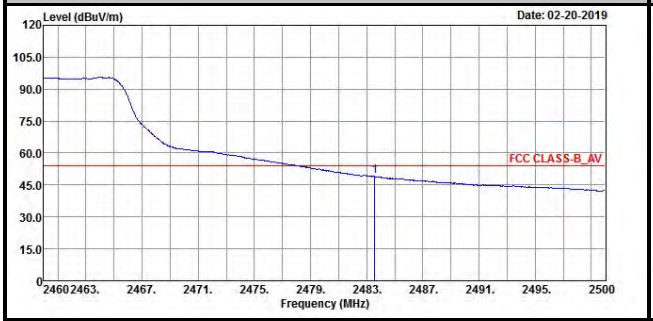


Vertical

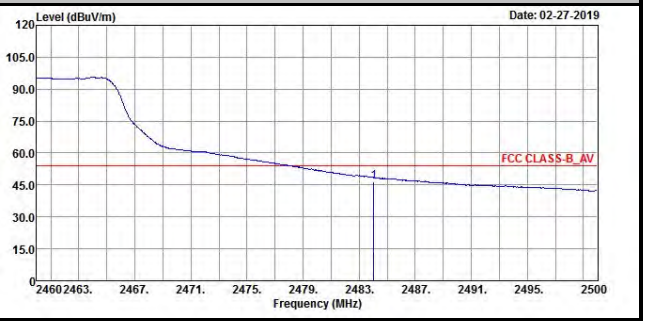


Average

Horizontal



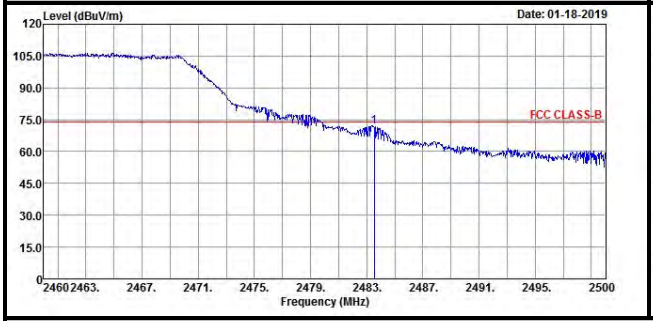
Vertical



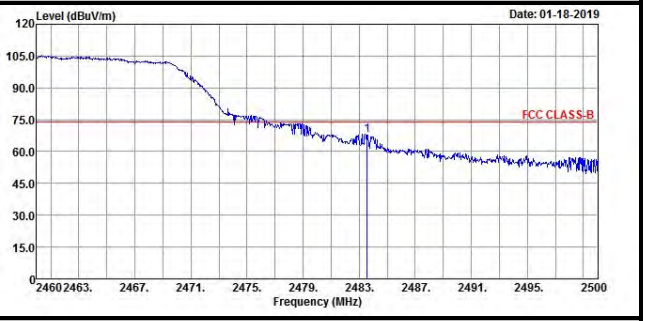
Ch 11

Peak

Horizontal

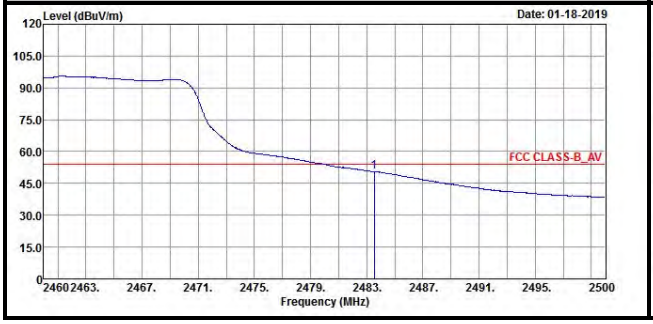


Vertical

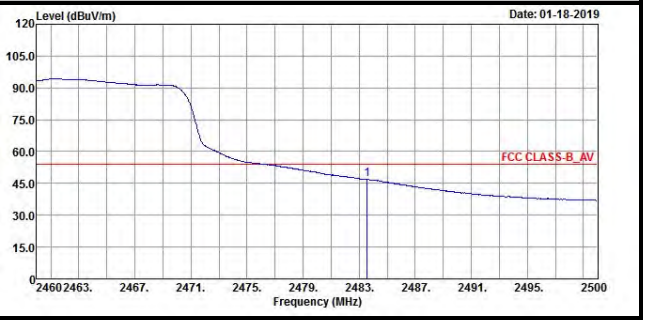


Average

Horizontal



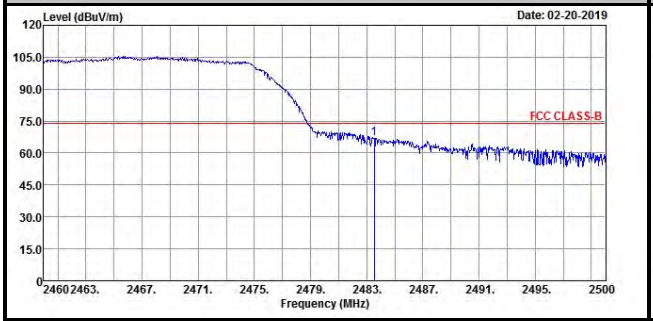
Vertical



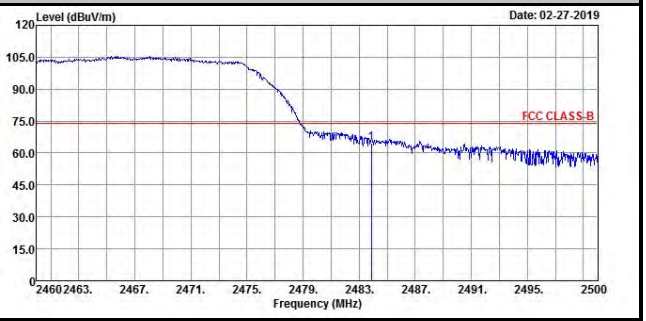
Ch 12

Peak

Horizontal

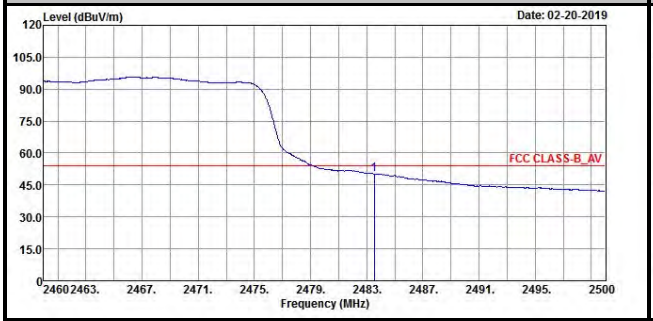


Vertical

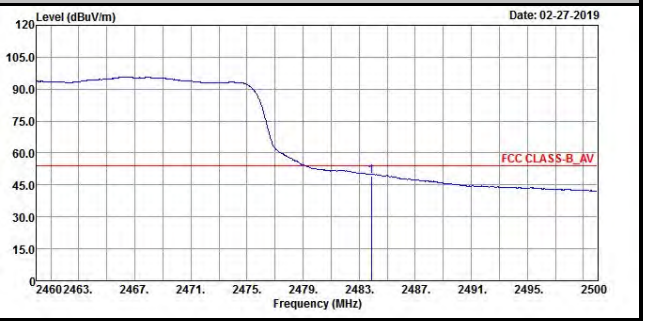


Average

Horizontal



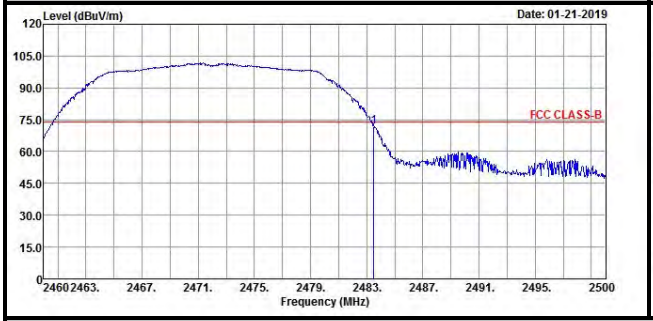
Vertical



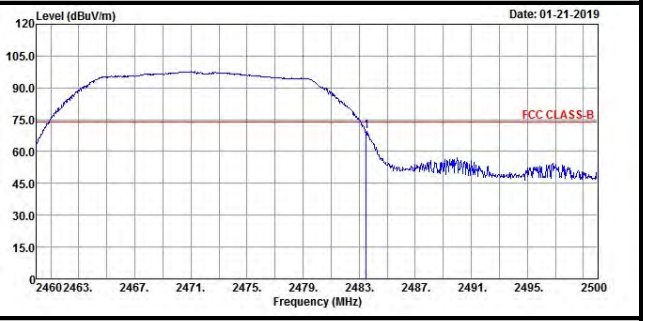
Ch 13

Peak

Horizontal

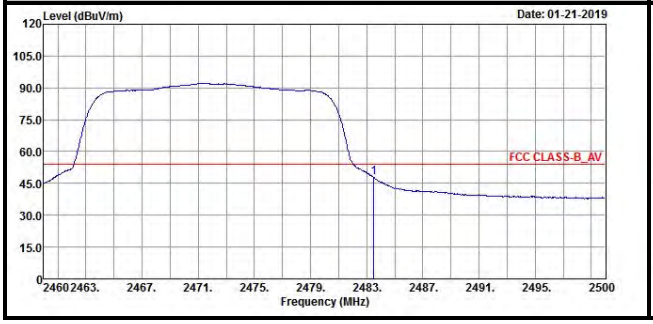


Vertical

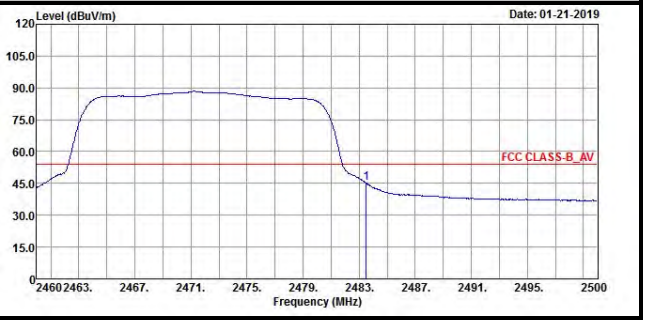


Average

Horizontal



Vertical

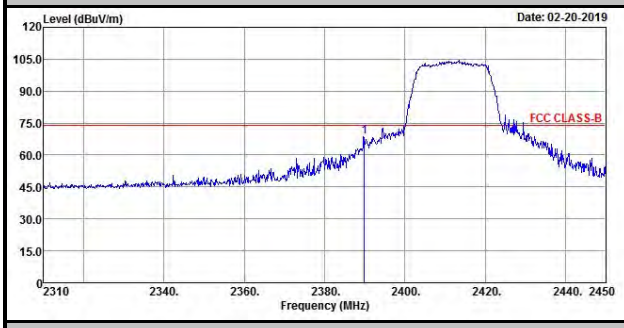


802.11n (HT20)

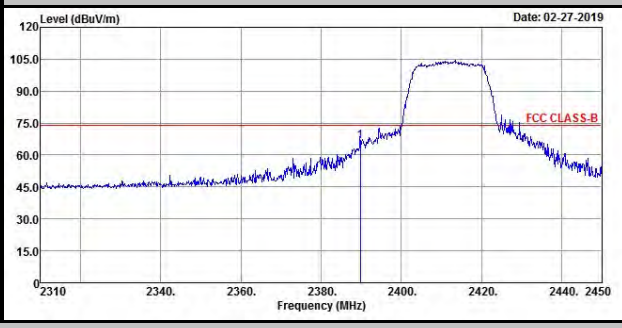
Ch 1

Peak

Horizontal

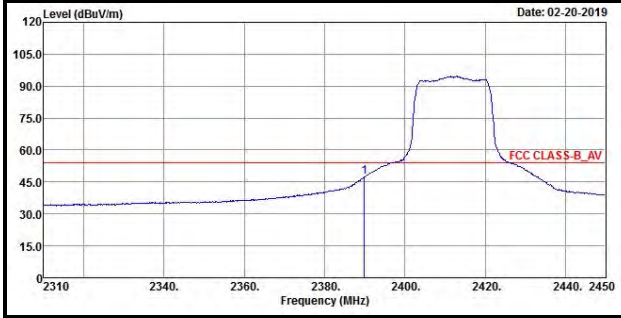


Vertical

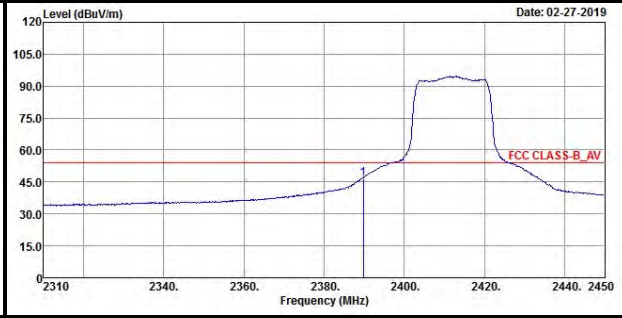


Average

Horizontal



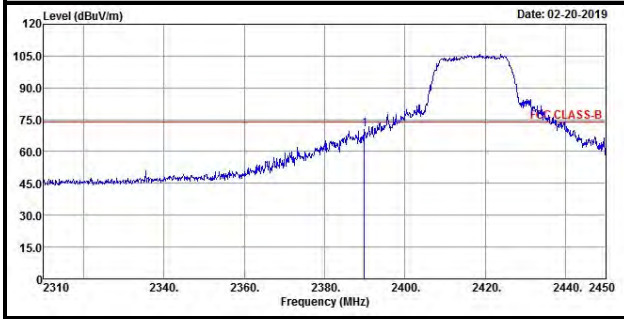
Vertical



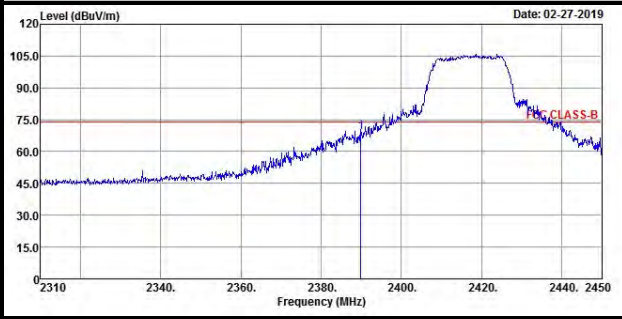
Ch 2

Peak

Horizontal

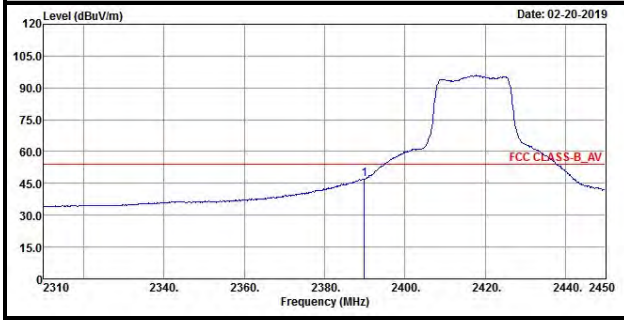


Vertical

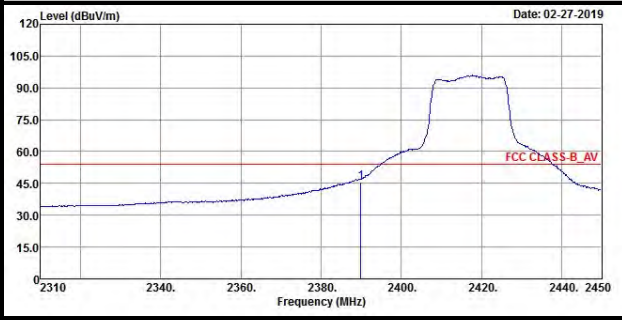


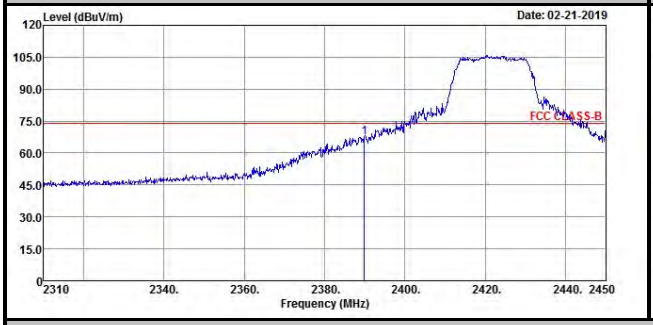
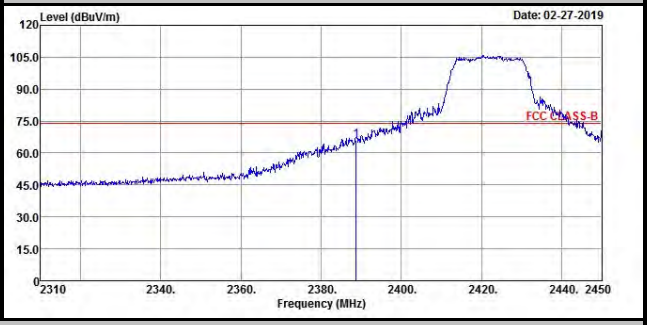
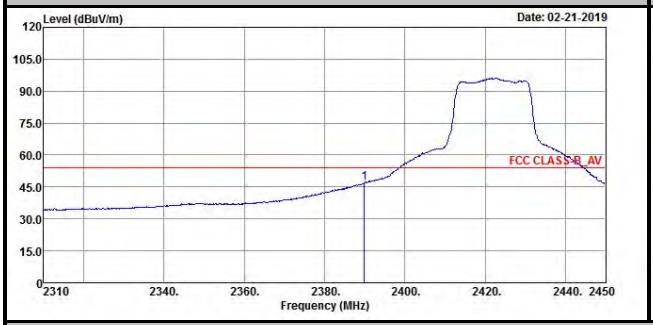
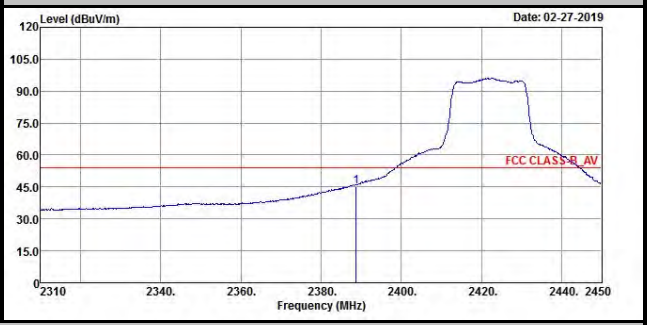
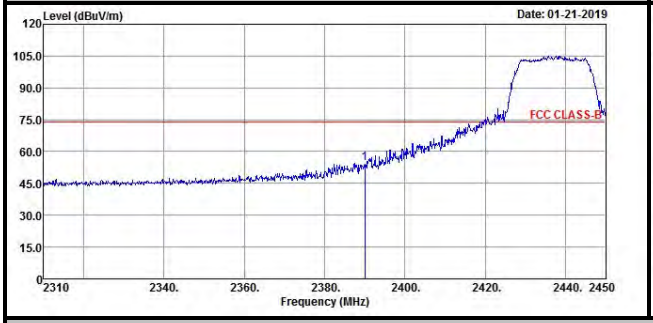
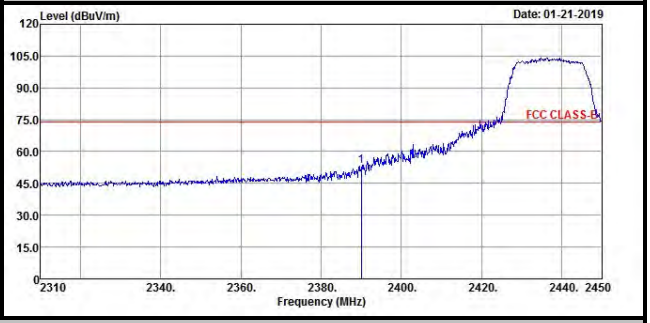
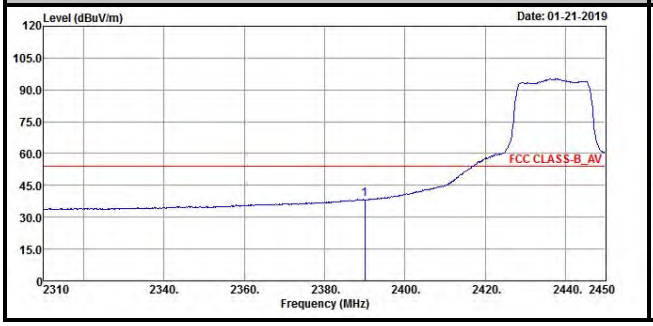
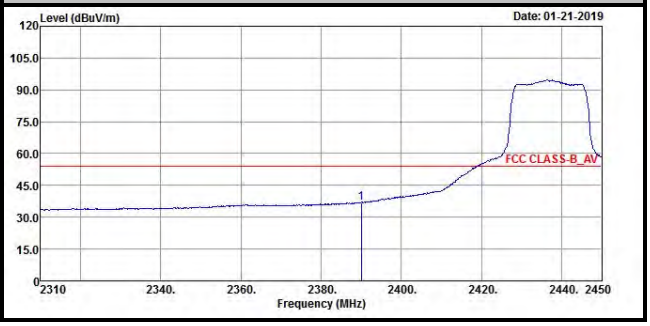
Average

Horizontal



Vertical

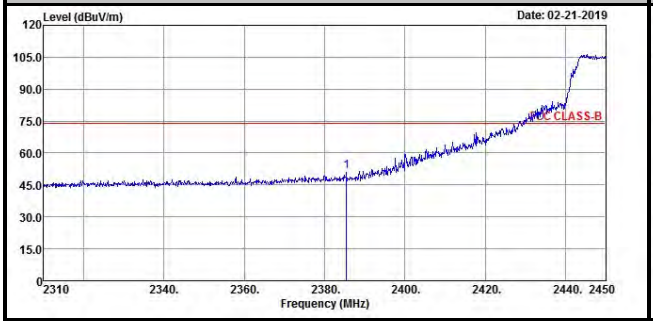


Ch 3	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	
Ch 6	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

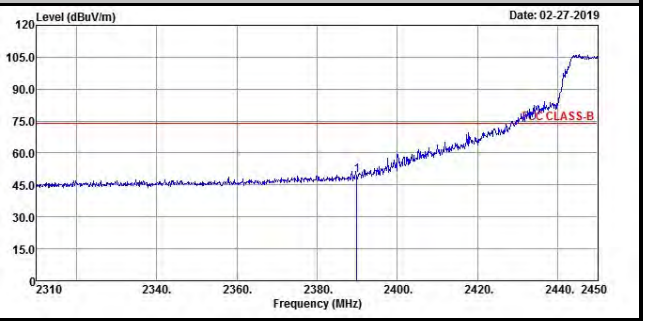
Ch 9

Peak

Horizontal

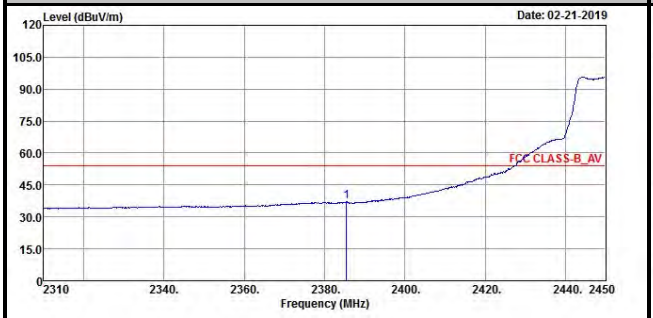


Vertical

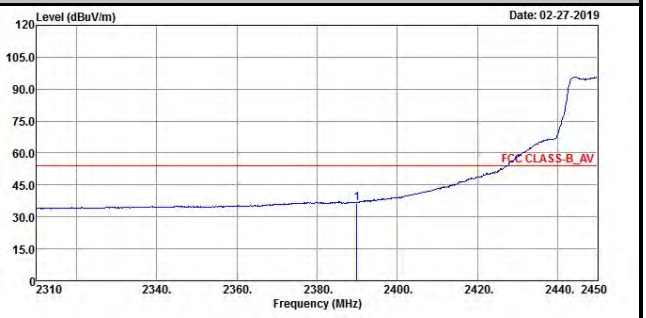


Average

Horizontal



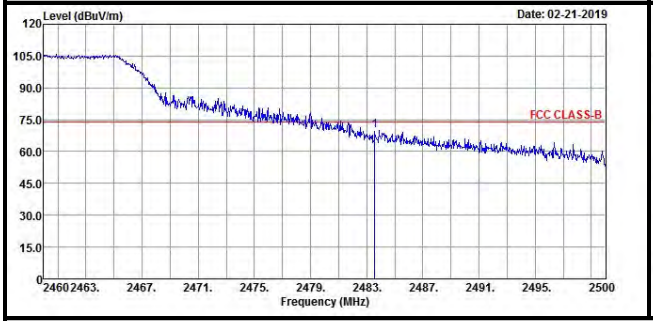
Vertical



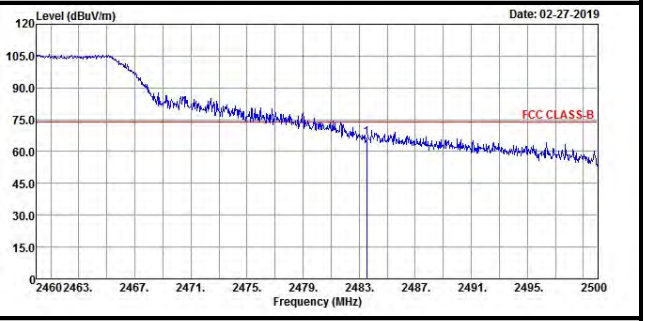
Ch 10

Peak

Horizontal

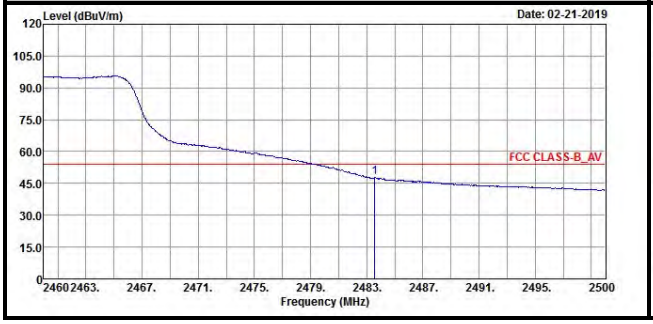


Vertical

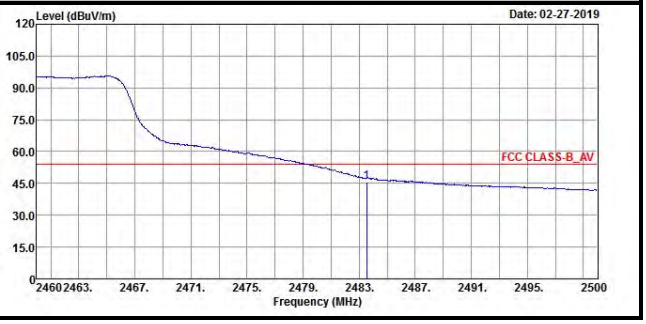


Average

Horizontal



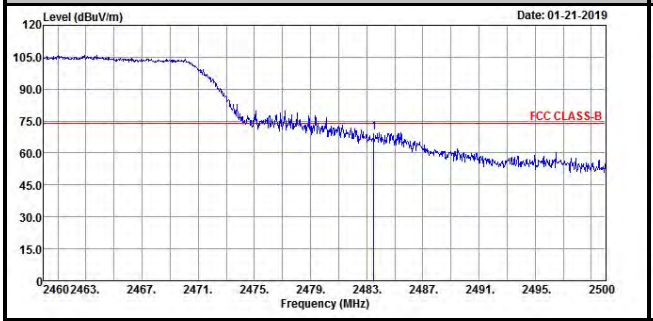
Vertical



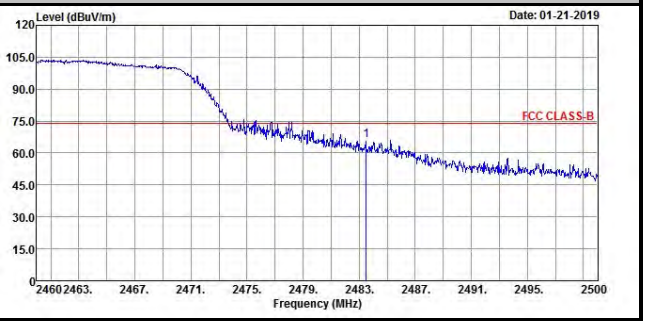
Ch 11

Peak

Horizontal

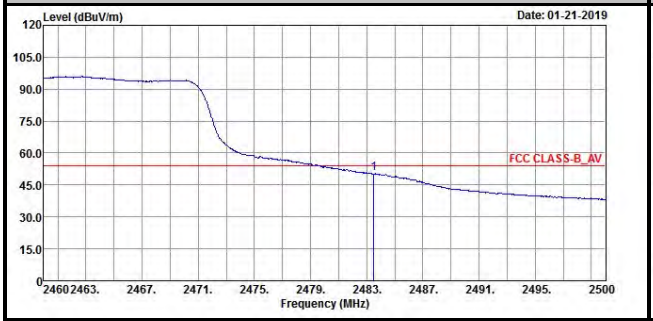


Vertical



Average

Horizontal



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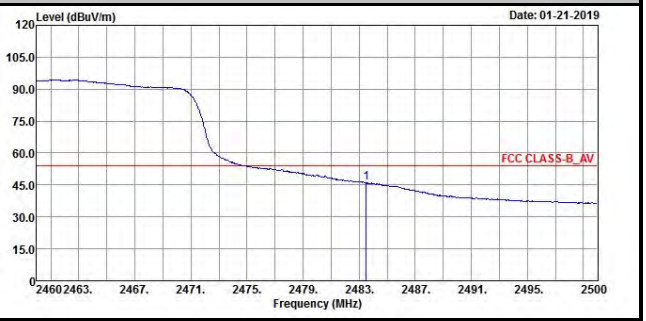
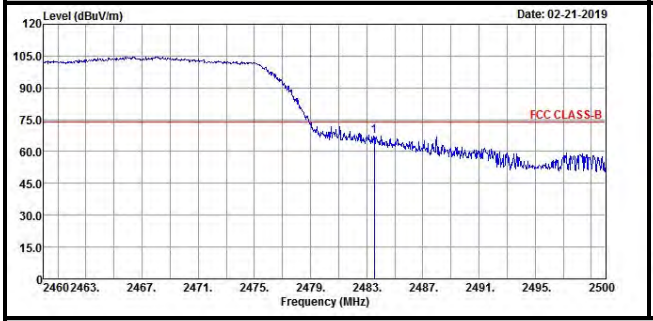


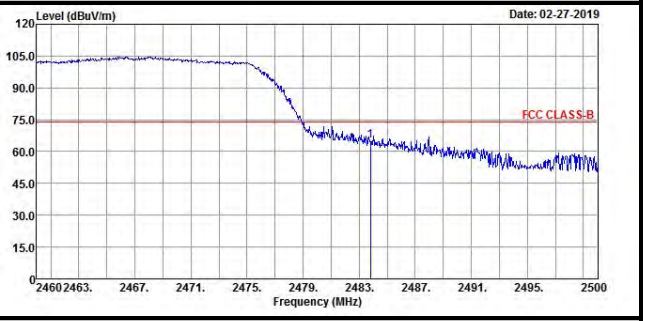
Ch 12

Peak

Horizontal

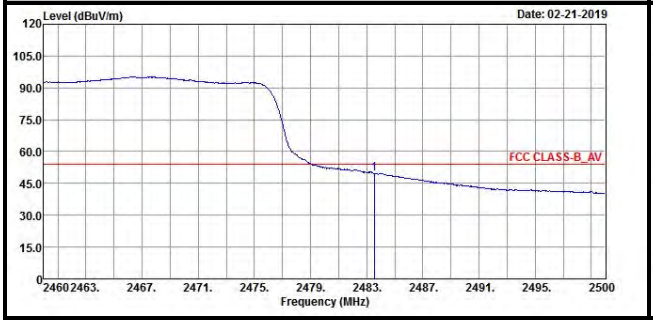


Vertical

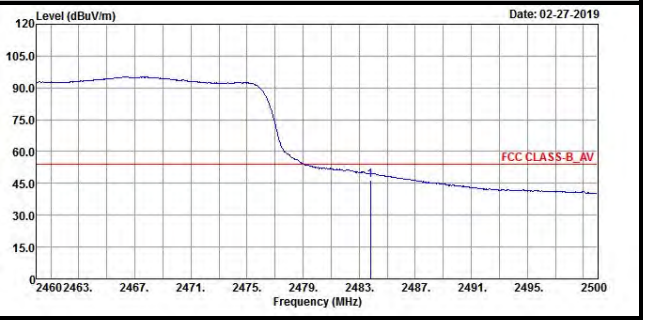


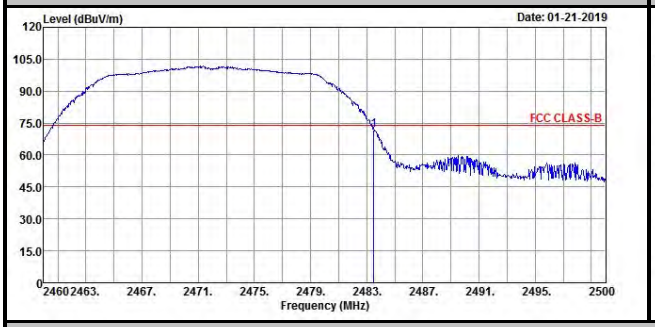
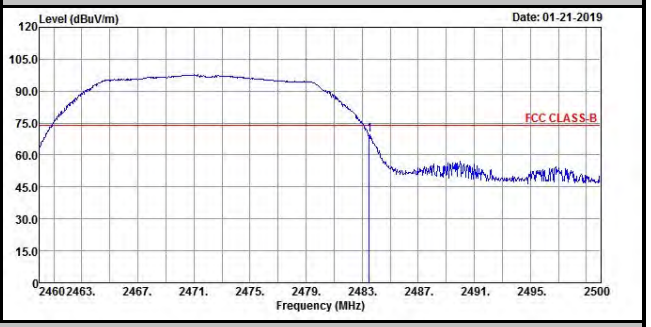
Average

Horizontal



Vertical



Ch 13	
Peak	
Horizontal	Vertical
	
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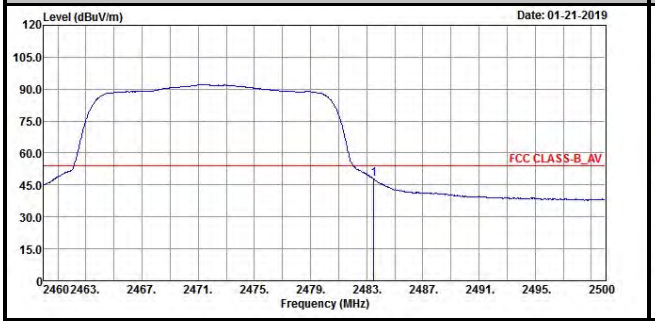
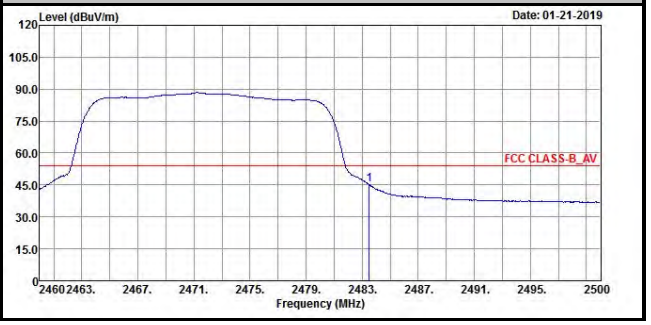
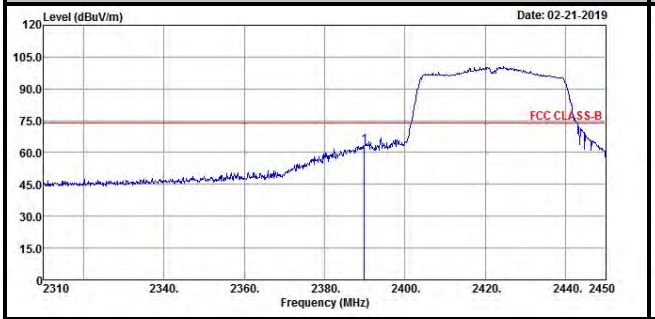
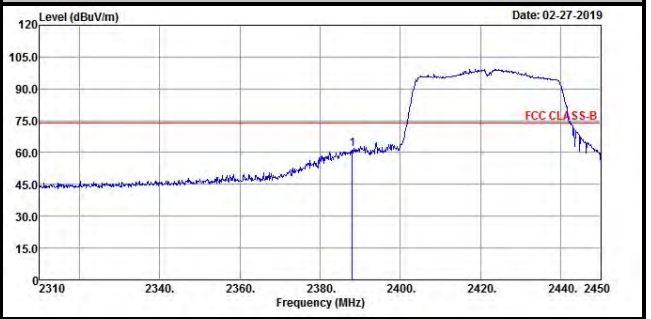
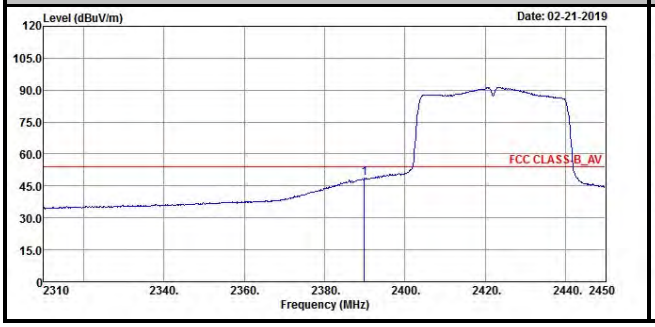
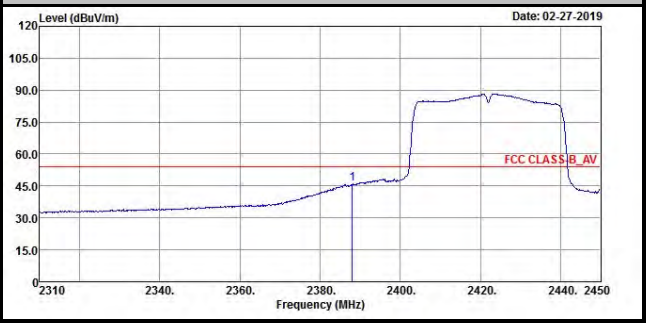
Horizontal	Vertical
	

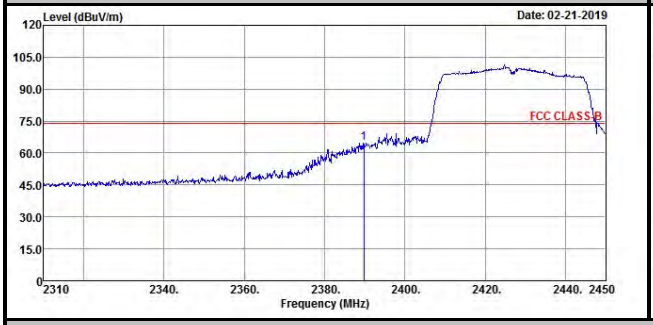
802.11n (HT40)

Ch 3	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

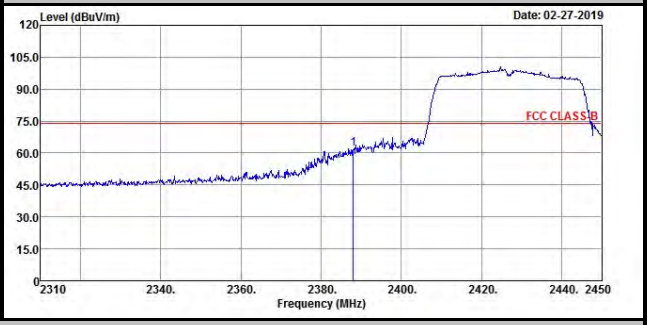
Ch 4

Peak

Horizontal

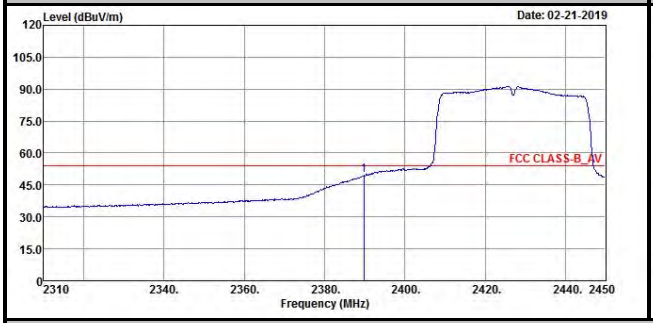


Vertical

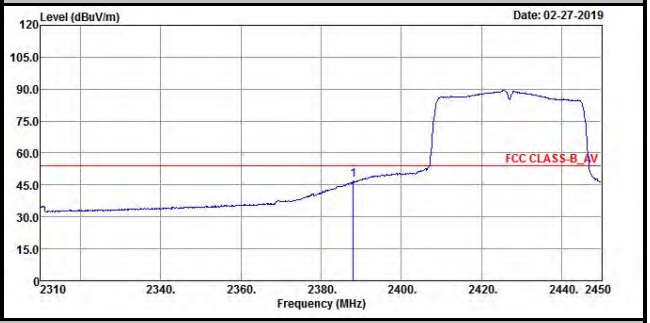


Average

Horizontal



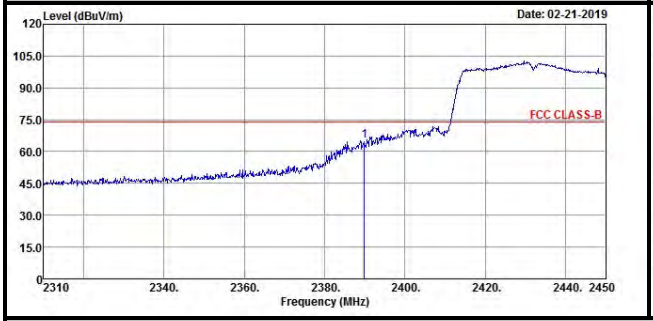
Vertical



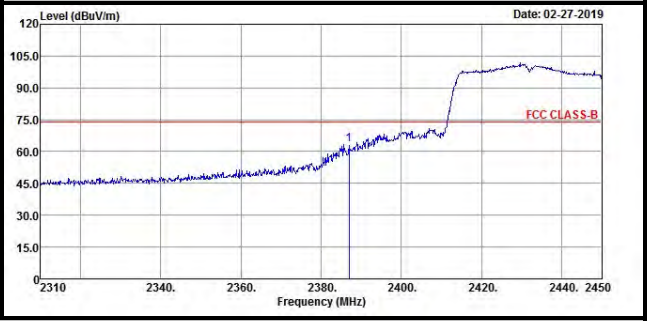
Ch 5

Peak

Horizontal

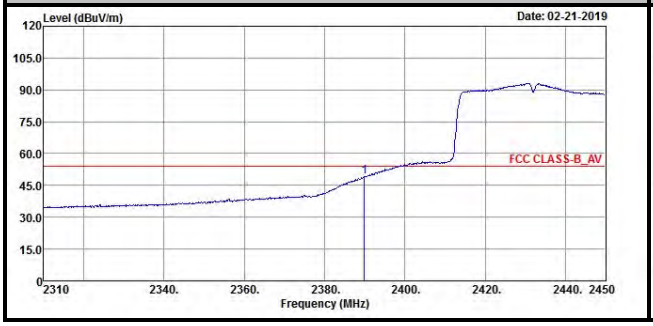


Vertical

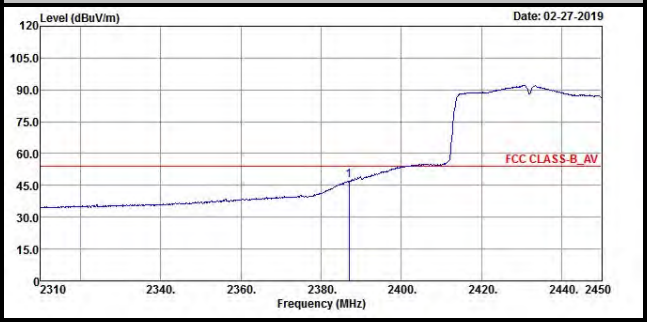


Average

Horizontal



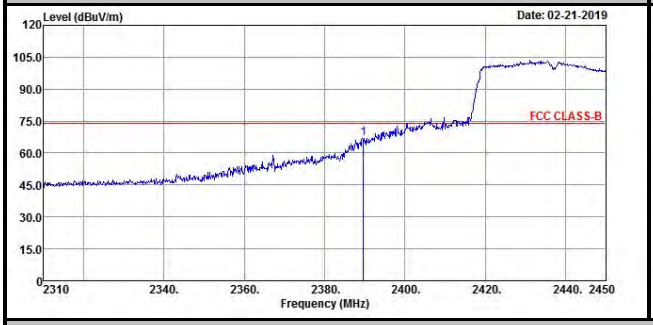
Vertical



Ch 6

Peak

Horizontal



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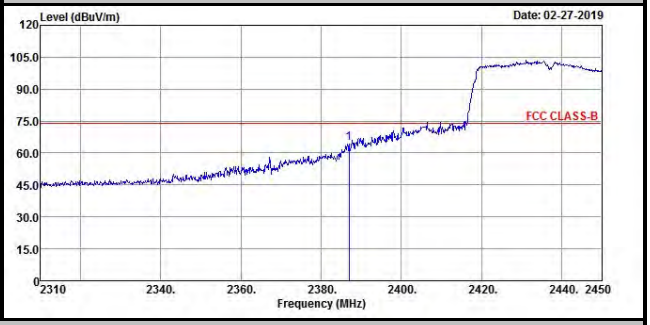

Average

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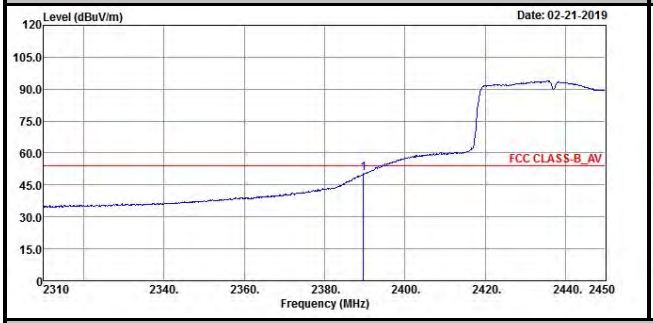

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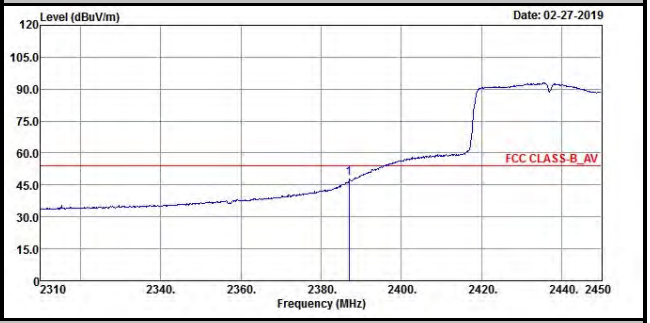
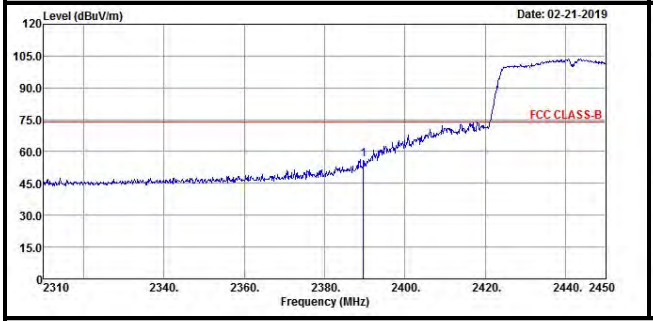


Ch 7

Peak

Horizontal



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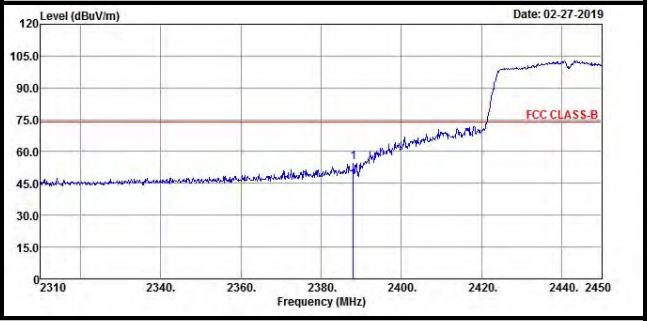

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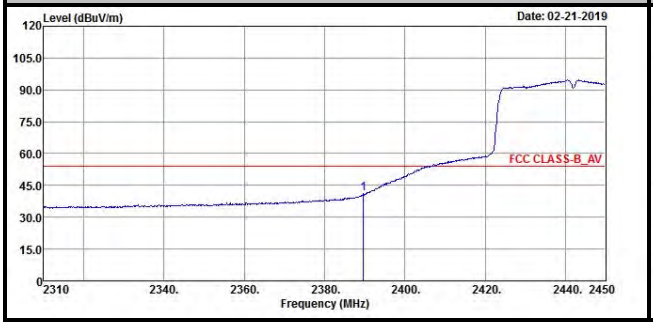
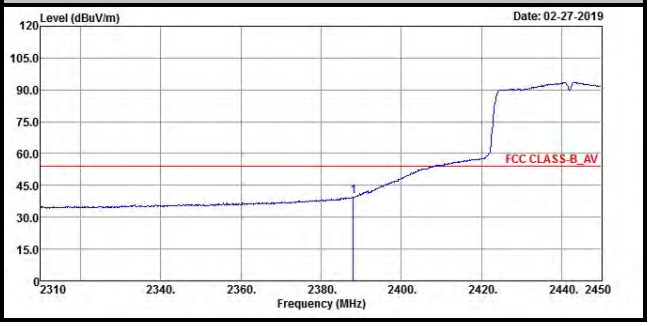


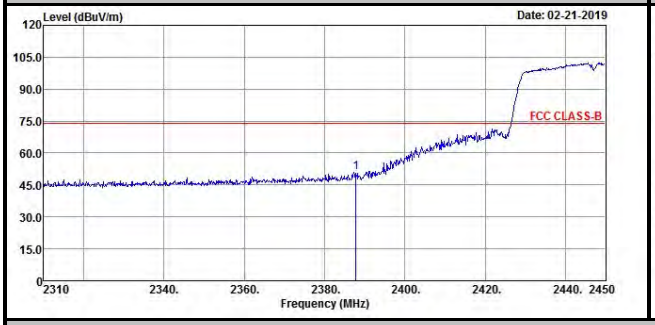
Vertical



Ch 8

Peak

Horizontal



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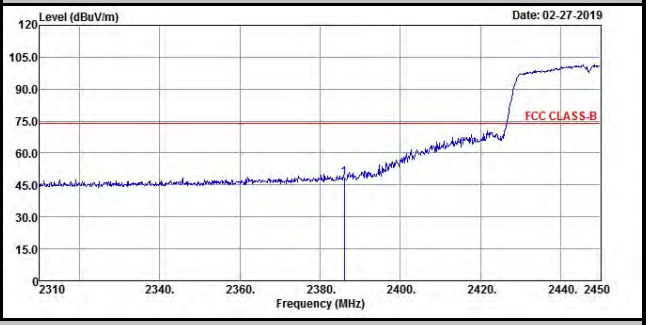

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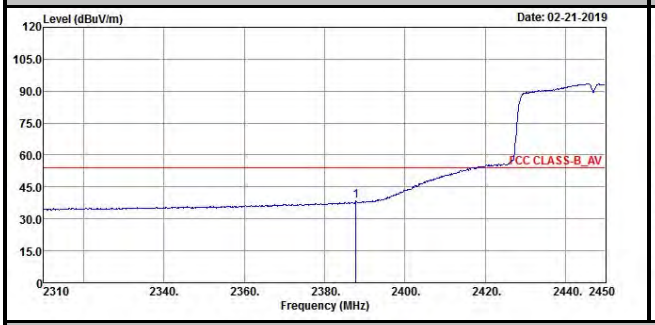
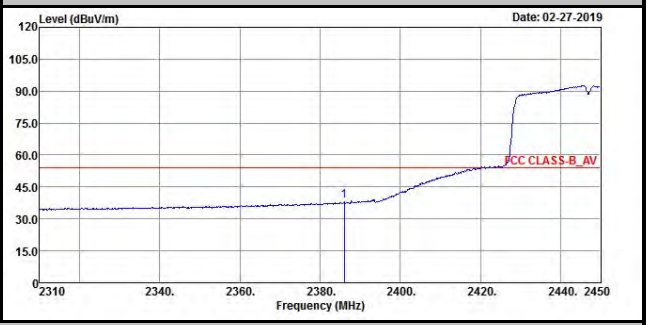


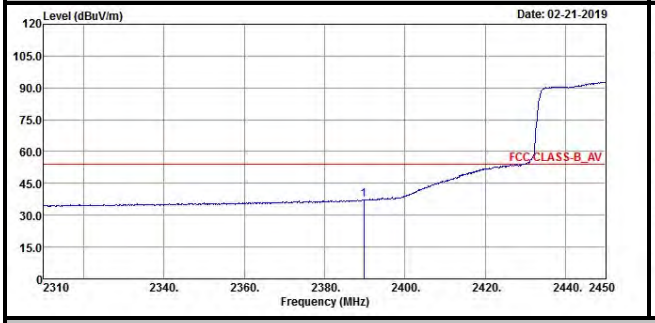
Vertical



Ch 9

Peak

Horizontal



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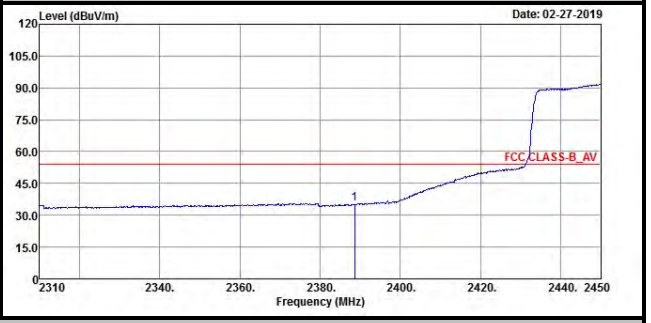

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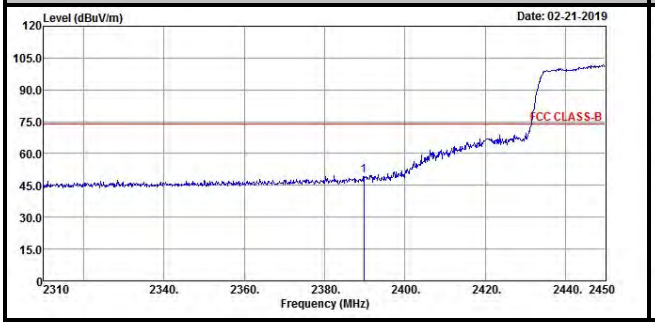
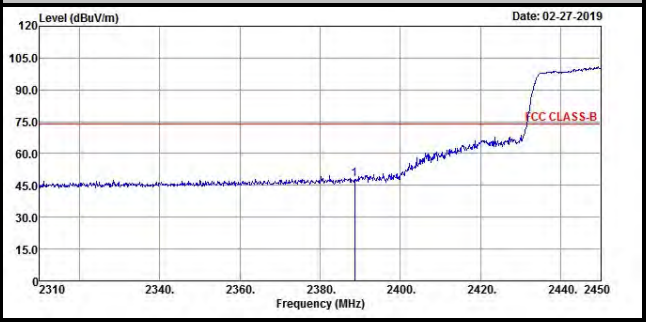
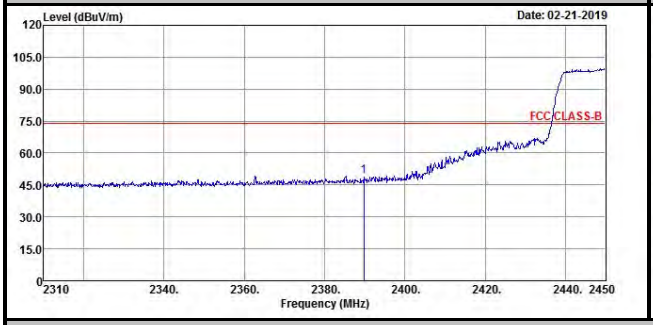
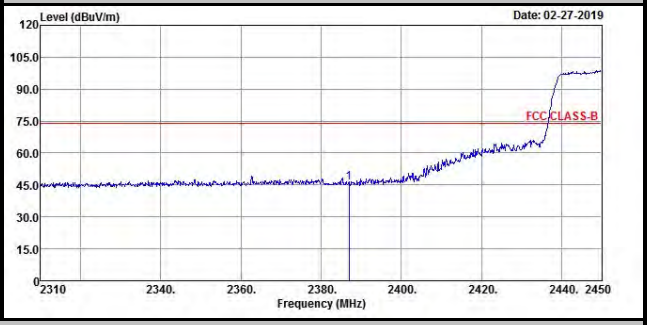
Horizontal



Vertical



Ch 10	
Peak	
Horizontal	Vertical
	
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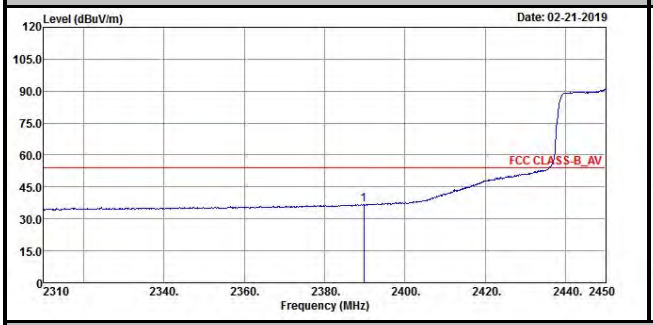
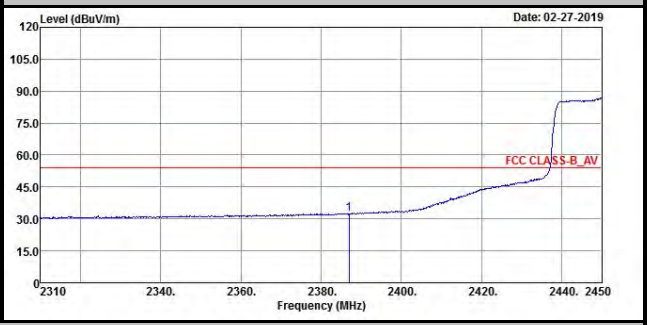
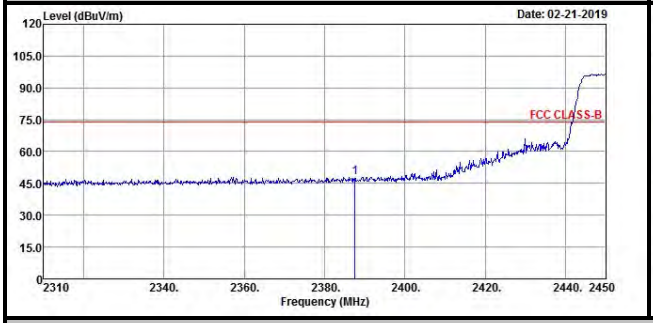
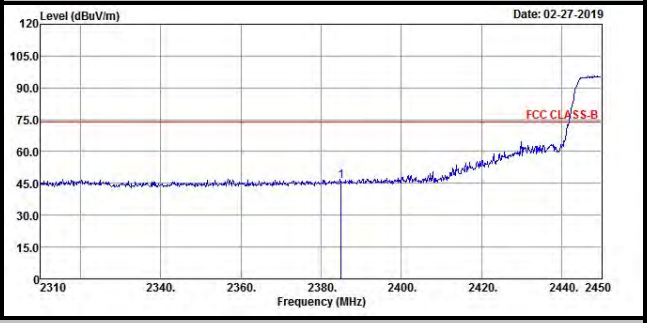
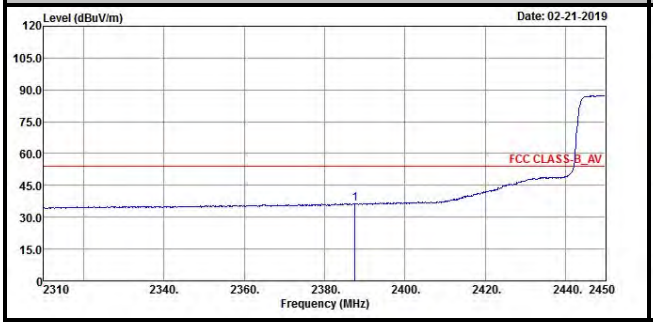
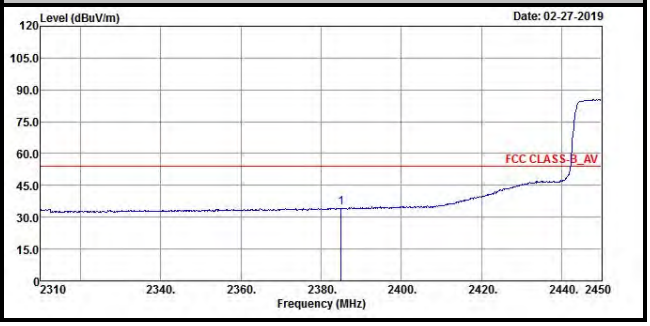
Horizontal	Vertical
	
Ch 11	
Peak	
Horizontal	Vertical
	
Average	
Horizontal	Vertical
	

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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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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