Variant FCC Test Report

Report No.:	RF170818C25C-2
FCC ID:	XOJ-WA2000
Test Model:	WA2000C, WA2000U, WA2000M
Received Date:	Jul. 23, 2018
Test Date:	Sep. 01, 2018 ~ Sep. 06, 2018
Issued Date:	Oct. 17, 2018
Applicant:	Tibbo Technology Inc.
Address:	9F-3, No.31, Lane 169, Kang-Ning St., Hsi-Chih, New Taipei City, Taiwan 22180
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location (1):	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Test Location (2):	No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C
FCC Registration / Designation Number:	427177 / TW0011

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Release Control Record

Issue No.	Description	Date Issued
RF170818C25C-2	Original Release	Oct. 17, 2018

1 Certificate of Conformity

Product:	WA2000
Brand:	Tibbo Technology Inc.
Test Model:	WA2000C, WA2000U, WA2000M
Sample Status:	Production Unit
Applicant:	Tibbo Technology Inc.
Test Date:	Sep. 01, 2018 ~ Sep. 06, 2018
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

This report is issued as a supplementary report to BV CPS report no.: RF170818C25-2. This report shall be used by combining with its original report.

Prepared by :  , **Date:** Oct. 17, 2018

Gina Liu / Specialist

Approved by :  , **Date:** Oct. 17, 2018

Dylan Chiou / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.407(b)(6)	AC Power Conducted Emissions	N/A	Refer to Note
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.01 dB at 5149.7 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	N/A	Refer to Note
15.407(a)(1/2/3)	Peak Power Spectral Density	N/A	Refer to Note
15.407(e)	6 dB Bandwidth	N/A	Refer to Note
15.407(g)	Frequency Stability	N/A	Refer to Note
15.203	Antenna Requirement	N/A	Refer to Note

Note: Only radiated emission tests and conducted Power had been performed for the addendum. Refer to original report for other test data.

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) (±)
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	WA2000
Brand	Tibbo Technology Inc.
Test Model	WA2000C, WA2000U, WA2000M
Status of EUT	Production Unit
Power Supply Rating	3.3 Vdc (Host equipment)
Modulation Type	64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 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	5180 ~ 5240 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
Output Power	25.23 mW for 5180 ~ 5240 MHz 20.94 mW for 5745 ~ 5825 MHz
Antenna Type	Refer to Note as below
Antenna Connector	Refer to Note as below
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. This report is issued as a supplementary report to BV CPS report no.: RF170818C25-2. The difference compared with original report is adding new antennas and changing applicant, product name, brand name, model name. Therefore, only conducted Power and radiated emission tests had been performed for this report.
2. The EUT contains 3 samples listed as below.

Sample	Model	Description
C	WA2000C	Chip antenna onboard
B	WA2000U	with U.FL Connector
A	WA2000M	with MHF4 connector

3. The antenna information is listed as below.

	Antenna Type	Brand	Model	Antenna Gain (dBi)			Connecter Type
				BT	WLAN 2.4 GHz	WLAN 5 GHz	
1	PCB	Johanson Technology	2450AD14A5500	1.0	1.0	4.0	none (like solder)
2	Monopole	WIFI-Link Technologies Co Ltd	WLD1	6.0	6.0	5.0	R-SMA
3	Monopole	WIFI-Link Technologies Co Ltd	WLD1	6.0	6.0	5.0	R-SMA

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

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

For 5745 ~ 5825 MHz:

5 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	-	√	Sample A
B	√	√	-	√	Sample B
C	√	√	-	√	Sample C

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:
1. The EUT had been pre-tested on the positioned of each 0 and 90 degree for antenna. The worst case was found when positioned on **90 degree**.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B, C	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
		802.11n (HT40)	151 to 159	151, 159	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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5180-5240	802.11n (HT40)	38 to 46	38	OFDM	BPSK	13.5
B	5180-5240	802.11n (HT40)	38 to 46	38	OFDM	BPSK	13.5
C	5745-5825	802.11n (HT40)	151 to 159	159	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	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B, C	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	3.3 Vdc	Charles Hsiao, Harry Hsueh
RE<1G	25 deg. C, 65 % RH	3.3 Vdc	Charles Hsiao
APCM	25 deg. C, 65 % RH	3.3 Vdc	Gavin Wu

3.3 Description of Support Units

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

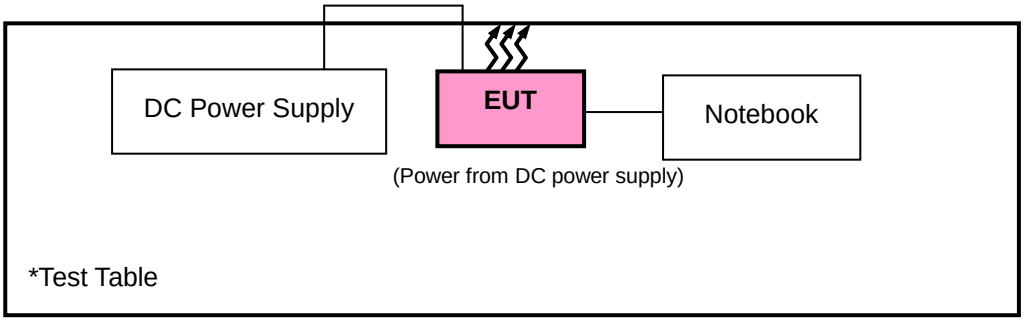
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Notebook	DELL	Inspiron 14R	8LRKKW1	N/A
2.	DC power supply	Keysight	U8002A	MY56330015	N/A

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

Note:

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

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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 Limits of Unwanted Emission Out of the Restricted Bands

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v02r01		Field Strength at 3 m	
		PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	**Applicable To**	**EIRP Limit**	**Equivalent Field Strength at 3 m**
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2 (dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8 (dBμV/m) *3 PK:122.2 (dBμV/m) *4
	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*1 beyond 75 MHz or more above of the band edge.

*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note:

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 20, 2018	Aug. 19, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Dec. 14, 2017	Dec. 13, 2018
HORN Antenna ETS-Lindgren	3117	00143293	Dec. 13, 2017	Dec. 12, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 01, 2017	Nov. 30, 2018
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier Agilent	310N	187226	Jun. 19, 2018	Jun. 18, 2019
Preamplifier Agilent	83017A	MY39501357	Jun. 19, 2018	Jun. 18, 2019
Power Meter Anritsu	ML2495A	1232002	Dec. 07, 2017	Dec. 06, 2018
Power Sensor Anritsu	MA2411B	1207325	Dec. 07, 2017	Dec. 06, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 19, 2018	Jun. 18, 2019
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 19, 2018	Jun. 18, 2019
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

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

4.1.4 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. Both 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:

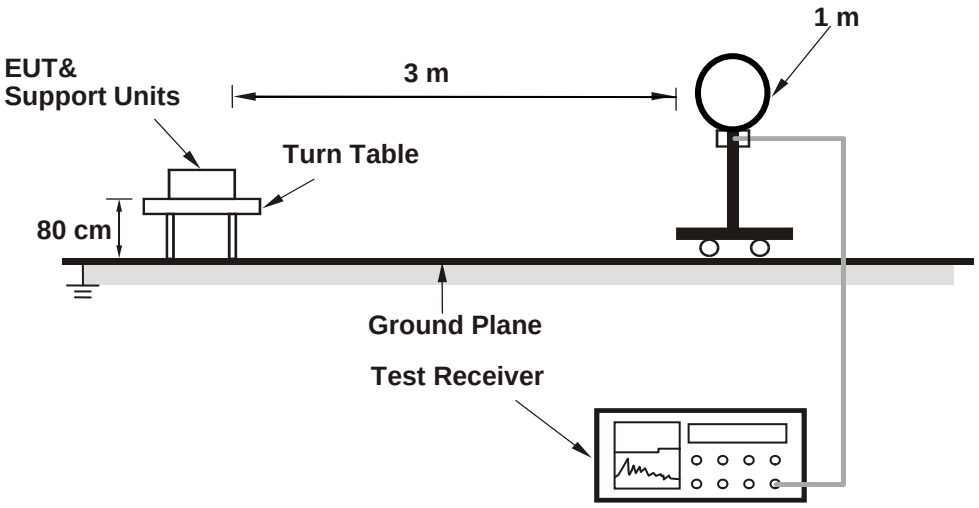
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
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. (11a: 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.

4.1.5 Deviation from Test Standard

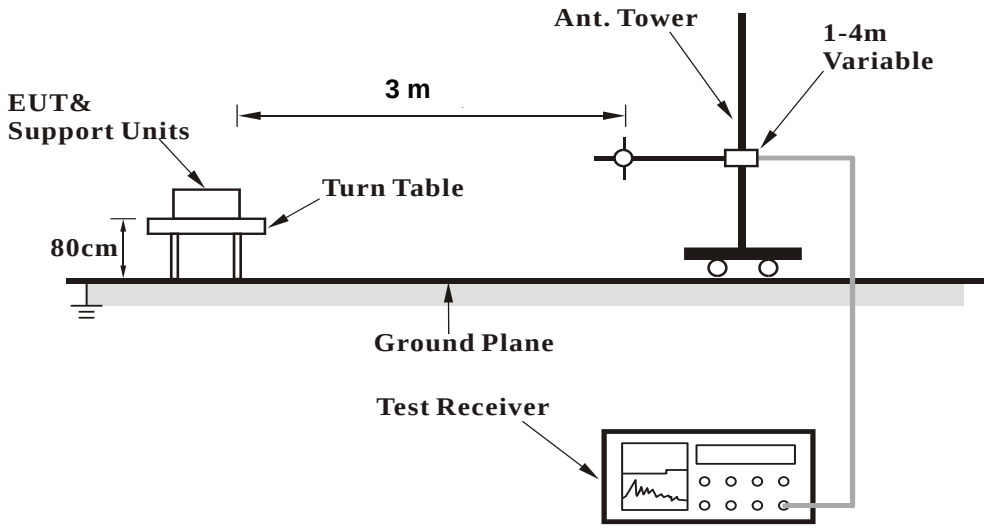
No deviation.

4.1.6 Test Setup

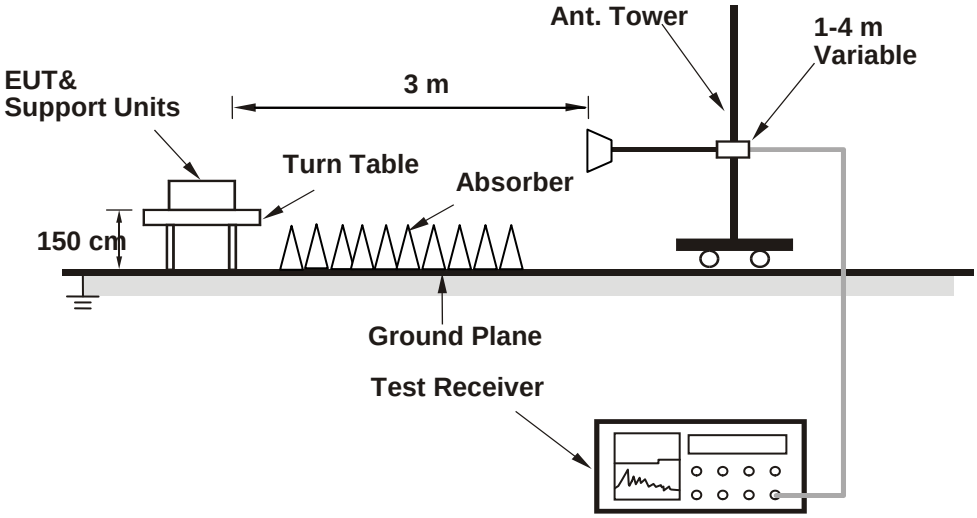
<Radiated Emission below 30 MHz>



<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).

4.1.7 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.

4.1.8 Test Results

Above 1 GHz Data：

Mode A

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5136.8	43.27	35.02	54	-10.73	34.11	8.13	33.99	200	130	Average
5136.8	53.95	45.7	74	-20.05	34.11	8.13	33.99	200	130	Peak
5180	90.65	82.34			34.15	8.16	34	200	130	Average
5180	97.34	89.03			34.15	8.16	34	200	130	Peak
*10360	53.43	39.13	68.2	-14.77	37.12	12.3	35.12	124	199	Peak
Antenna 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**
5149.55	44.71	36.46	54	-9.29	34.12	8.13	34	103	350	Average
5149.55	55.02	46.77	74	-18.98	34.12	8.13	34	103	350	Peak
5180	97.47	89.16			34.15	8.16	34	103	350	Average
5180	104.51	96.2			34.15	8.16	34	103	350	Peak
*10360	54.15	39.85	68.2	-14.05	37.12	12.3	35.12	142	14	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5137.1	43.22	34.97	54	-10.78	34.11	8.13	33.99	200	130	Average
5137.1	53.94	45.69	74	-20.06	34.11	8.13	33.99	200	130	Peak
5200	90.54	82.19			34.16	8.19	34	200	130	Average
5200	97.57	89.22			34.16	8.19	34	200	130	Peak
5449	43.06	34.23	54	-10.94	34.36	8.51	34.04	200	130	Average
5449	54.32	45.49	74	-19.68	34.36	8.51	34.04	200	130	Peak
*10400	53.65	39.31	68.2	-14.55	37.14	12.36	35.16	118	146	Peak
Antenna 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**
5140.55	44.17	35.91	54	-9.83	34.12	8.13	33.99	103	350	Average
5140.55	54.5	46.24	74	-19.5	34.12	8.13	33.99	103	350	Peak
5200	97.54	89.19			34.16	8.19	34	103	350	Average
5200	104.11	95.76			34.16	8.19	34	103	350	Peak
5350.44	43.33	34.7	54	-10.67	34.28	8.38	34.03	103	350	Average
5350.44	54.7	46.07	74	-19.3	34.28	8.38	34.03	103	350	Peak
*10400	53.77	39.43	68.2	-14.43	37.14	12.36	35.16	114	164	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5240	90.85	82.41			34.19	8.26	34.01	200	130	Average
5240	97.76	89.32			34.19	8.26	34.01	200	130	Peak
5447.35	43.12	34.29	54	-10.88	34.36	8.51	34.04	200	130	Average
5447.35	54.26	45.43	74	-19.74	34.36	8.51	34.04	200	130	Peak
*10480	53.67	39.16	68.2	-14.53	37.19	12.53	35.21	182	151	Peak
Antenna 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**
5240	97.74	89.3			34.19	8.26	34.01	103	350	Average
5240	104.04	95.6			34.19	8.26	34.01	103	350	Peak
5367.49	43.62	34.95	54	-10.38	34.29	8.41	34.03	103	350	Average
5367.49	54.09	45.42	74	-19.91	34.29	8.41	34.03	103	350	Peak
*10480	54.14	39.63	68.2	-14.06	37.19	12.53	35.21	118	140	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5745	90.53	81.34			34.64	8.66	34.11	100	326	Average
5745	97.7	88.51			34.64	8.66	34.11	100	326	Peak
11490	47.23	32.11	54	-6.77	37.89	12.62	35.39	117	14	Average
11490	55.99	40.87	74	-18.01	37.89	12.62	35.39	117	14	Peak
Antenna 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**
5745	95.85	86.66			34.64	8.66	34.11	100	251	Average
5745	102.42	93.23			34.64	8.66	34.11	100	251	Peak
11490	47.41	32.29	54	-6.59	37.89	12.62	35.39	114	85	Average
11490	54.77	39.65	74	-19.23	37.89	12.62	35.39	114	85	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5604.475	53.83	44.8	68.2	-14.37	34.5	8.61	34.08	100	326	Peak
5659.075	53.17	44.08	74.92	-21.75	34.56	8.63	34.1	100	326	Peak
5920.525	52.13	42.75	71.51	-19.38	34.81	8.73	34.16	100	326	Peak
*6000.85	54.32	44.83	68.2	-13.88	34.9	8.76	34.17	100	326	Peak
Antenna 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**
*5592.4	55.09	46.08	68.2	-13.11	34.49	8.6	34.08	100	251	Peak
5660.125	53.62	44.53	75.69	-22.07	34.56	8.63	34.1	100	251	Peak
5917.375	53.1	43.72	73.84	-20.74	34.81	8.73	34.16	100	251	Peak
*5989.825	54.8	45.32	68.2	-13.4	34.9	8.75	34.17	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5785	90.56	81.33			34.68	8.68	34.13	100	326	Average
5785	97.24	88.01			34.68	8.68	34.13	100	326	Peak
11570	47.4	32.09	54	-6.6	38	12.68	35.37	124	17	Average
11570	55.62	40.31	74	-18.38	38	12.68	35.37	124	17	Peak
Antenna 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**
5785	95.66	86.43			34.68	8.68	34.13	100	251	Average
5785	102.38	93.15			34.68	8.68	34.13	100	251	Peak
11570	47.66	32.35	54	-6.34	38	12.68	35.37	147	159	Average
11570	55.39	40.08	74	-18.61	38	12.68	35.37	147	159	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5600.275	54.5	45.48	68.2	-13.7	34.5	8.6	34.08	100	326	Peak
5654.35	53.82	44.73	71.42	-17.6	34.56	8.63	34.1	100	326	Peak
5915.8	53.06	43.68	75.01	-21.95	34.81	8.73	34.16	100	326	Peak
*5980.9	55.1	45.64	68.2	-13.1	34.88	8.75	34.17	100	326	Peak
Antenna 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**
*5608.675	54.94	45.91	68.2	-13.26	34.5	8.61	34.08	100	251	Peak
5653.825	53.7	44.61	71.03	-17.33	34.56	8.63	34.1	100	251	Peak
5919.475	53.86	44.48	72.29	-18.43	34.81	8.73	34.16	100	251	Peak
*6007.675	54.07	44.56	68.2	-14.13	34.92	8.76	34.17	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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
5825	91.47	82.18			34.73	8.69	34.13	100	326	Average
5825	98.77	89.48			34.73	8.69	34.13	100	326	Peak
11650	48	32.47	54	-6	38.09	12.8	35.36	117	158	Average
11650	56.04	40.51	74	-17.96	38.09	12.8	35.36	117	158	Peak
Antenna 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
5825	96.99	87.7			34.73	8.69	34.13	100	251	Average
5825	103.69	94.4			34.73	8.69	34.13	100	251	Peak
11650	47.78	32.25	54	-6.22	38.09	12.8	35.36	114	345	Average
11650	56.05	40.52	74	-17.95	38.09	12.8	35.36	114	345	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5591.35	54.76	45.75	68.2	-13.44	34.49	8.6	34.08	100	326	Peak
5658.55	52.72	43.63	74.53	-21.81	34.56	8.63	34.1	100	326	Peak
5921.05	55.16	45.78	71.12	-15.96	34.81	8.73	34.16	100	326	Peak
*5997.175	53.75	44.26	68.2	-14.45	34.9	8.76	34.17	100	326	Peak
Antenna 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
*5587.675	54.8	45.79	68.2	-13.4	34.49	8.6	34.08	100	251	Peak
5655.925	54.89	45.8	72.58	-17.69	34.56	8.63	34.1	100	251	Peak
5919.475	53.65	44.27	72.29	-18.64	34.81	8.73	34.16	100	251	Peak
*5945.2	54.72	45.29	68.2	-13.48	34.85	8.74	34.16	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5127.2	43.26	35.04	54	-10.74	34.11	8.1	33.99	200	130	Average
5127.2	53.73	45.51	74	-20.27	34.11	8.1	33.99	200	130	Peak
5180	89.74	81.43			34.15	8.16	34	200	130	Average
5180	96.11	87.8			34.15	8.16	34	200	130	Peak
*10360	53.3	39	68.2	-14.9	37.12	12.3	35.12	154	329	Peak
Antenna 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**
5150	44.95	36.7	54	-9.05	34.12	8.13	34	103	350	Average
5150	54.96	46.71	74	-19.04	34.12	8.13	34	103	350	Peak
5180	96.65	88.34			34.15	8.16	34	103	350	Average
5180	103.35	95.04			34.15	8.16	34	103	350	Peak
*10360	54.11	39.81	68.2	-14.09	37.12	12.3	35.12	112	300	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5128.1	43.03	34.81	54	-10.97	34.11	8.1	33.99	200	130	Average
5128.1	53.73	45.51	74	-20.27	34.11	8.1	33.99	200	130	Peak
5200	89.77	81.42			34.16	8.19	34	200	130	Average
5200	96.58	88.23			34.16	8.19	34	200	130	Peak
5459.34	43.03	34.21	54	-10.97	34.36	8.51	34.05	200	130	Average
5459.34	53.56	44.74	74	-20.44	34.36	8.51	34.05	200	130	Peak
*10400	53.44	39.1	68.2	-14.76	37.14	12.36	35.16	125	155	Peak
Antenna 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**
5144.3	43.3	35.05	54	-10.7	34.12	8.13	34	103	350	Average
5144.3	53.91	45.66	74	-20.09	34.12	8.13	34	103	350	Peak
5200	96.58	88.23			34.16	8.19	34	103	350	Average
5200	103.9	95.55			34.16	8.19	34	103	350	Peak
5449.33	43.2	34.37	54	-10.8	34.36	8.51	34.04	103	350	Average
5449.33	53.62	44.79	74	-20.38	34.36	8.51	34.04	103	350	Peak
*10400	53.55	39.21	68.2	-14.65	37.14	12.36	35.16	114	135	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5240	90.74	82.3			34.19	8.26	34.01	200	130	Average
5240	97.42	88.98			34.19	8.26	34.01	200	130	Peak
5437.12	43.23	34.44	54	-10.77	34.35	8.48	34.04	200	130	Average
5437.12	54.52	45.73	74	-19.48	34.35	8.48	34.04	200	130	Peak
*10480	53.54	39.03	68.2	-14.66	37.19	12.53	35.21	154	211	Peak
Antenna 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**
5240	97.47	89.03			34.19	8.26	34.01	103	350	Average
5240	104.44	96			34.19	8.26	34.01	103	350	Peak
5359.9	43.65	35.02	54	-10.35	34.28	8.38	34.03	103	350	Average
5359.9	54.58	45.95	74	-19.42	34.28	8.38	34.03	103	350	Peak
*10480	54.29	39.78	68.2	-13.91	37.19	12.53	35.21	117	124	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5745	90.51	81.32			34.64	8.66	34.11	100	326	Average
5745	97.7	88.51			34.64	8.66	34.11	100	326	Peak
11490	47.88	32.76	54	-6.12	37.89	12.62	35.39	189	24	Average
11490	55.74	40.62	74	-18.26	37.89	12.62	35.39	189	24	Peak
Antenna 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**
5745	95.43	86.24			34.64	8.66	34.11	100	251	Average
5745	102.05	92.86			34.64	8.66	34.11	100	251	Peak
11490	47.57	32.45	54	-6.43	37.89	12.62	35.39	157	118	Average
11490	54.57	39.45	74	-19.43	37.89	12.62	35.39	157	118	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5640.7	53.48	44.41	68.2	-14.72	34.54	8.62	34.09	100	326	Peak
5659.6	52.93	43.84	75.3	-22.37	34.56	8.63	34.1	100	326	Peak
5922.1	52.69	43.29	70.35	-17.66	34.83	8.73	34.16	100	326	Peak
*6000.325	54.36	44.87	68.2	-13.84	34.9	8.76	34.17	100	326	Peak
Antenna 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**
*5596.075	56.01	47	68.2	-12.19	34.49	8.6	34.08	100	251	Peak
5653.825	54.52	45.43	71.03	-16.51	34.56	8.63	34.1	100	251	Peak
5922.625	53.13	43.73	69.96	-16.83	34.83	8.73	34.16	100	251	Peak
*6015.025	54.01	44.51	68.2	-14.19	34.92	8.76	34.18	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5785	90.55	81.32			34.68	8.68	34.13	100	326	Average
5785	97.23	88			34.68	8.68	34.13	100	326	Peak
11570	47.6	32.29	54	-6.4	38	12.68	35.37	166	65	Average
11570	55.62	40.31	74	-18.38	38	12.68	35.37	166	65	Peak
Antenna 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**
5785	95.88	86.65			34.68	8.68	34.13	100	251	Average
5785	102.09	92.86			34.68	8.68	34.13	100	251	Peak
11570	48.14	32.83	54	-5.86	38	12.68	35.37	157	195	Average
11570	55.39	40.08	74	-18.61	38	12.68	35.37	157	195	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5621.8	54.76	45.71	68.2	-13.44	34.52	8.61	34.08	100	326	Peak
5656.45	52.42	43.33	72.97	-20.55	34.56	8.63	34.1	100	326	Peak
5923.675	52.94	43.54	69.18	-16.24	34.83	8.73	34.16	100	326	Peak
*5999.275	54.41	44.92	68.2	-13.79	34.9	8.76	34.17	100	326	Peak
Antenna 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**
*5633.35	54.96	45.89	68.2	-13.24	34.54	8.62	34.09	100	251	Peak
5655.925	54.3	45.21	72.58	-18.28	34.56	8.63	34.1	100	251	Peak
5921.575	54.14	44.74	70.73	-16.59	34.83	8.73	34.16	100	251	Peak
*6020.275	54.86	45.35	68.2	-13.34	34.92	8.77	34.18	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5825	90.8	81.51			34.73	8.69	34.13	100	326	Average
5825	97.7	88.41			34.73	8.69	34.13	100	326	Peak
11650	47.75	32.22	54	-6.25	38.09	12.8	35.36	187	311	Average
11650	56.2	40.67	74	-17.8	38.09	12.8	35.36	187	311	Peak
Antenna 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**
5825	95.71	86.42			34.73	8.69	34.13	100	251	Average
5825	102.57	93.28			34.73	8.69	34.13	100	251	Peak
11650	47.91	32.38	54	-6.09	38.09	12.8	35.36	154	299	Average
11650	56.11	40.58	74	-17.89	38.09	12.8	35.36	154	299	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5586.625	54.02	45.01	68.2	-14.18	34.49	8.6	34.08	100	326	Peak
5653.3	52.64	43.54	70.64	-18	34.56	8.63	34.09	100	326	Peak
5923.15	53.24	43.84	69.57	-16.33	34.83	8.73	34.16	100	326	Peak
*5984.575	54.61	45.15	68.2	-13.59	34.88	8.75	34.17	100	326	Peak
Antenna 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**
*5649.1	54.3	45.23	68.2	-13.9	34.54	8.62	34.09	100	251	Peak
5654.875	54.84	45.75	71.81	-16.97	34.56	8.63	34.1	100	251	Peak
5918.425	55.05	45.67	73.07	-18.02	34.81	8.73	34.16	100	251	Peak
*6019.75	55.1	45.59	68.2	-13.1	34.92	8.77	34.18	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5150	46.06	37.81	54	-7.94	34.12	8.13	34	200	130	Average
5150	56.99	48.74	74	-17.01	34.12	8.13	34	200	130	Peak
5190	86.55	78.21			34.15	8.19	34	200	130	Average
5190	93.54	85.2			34.15	8.19	34	200	130	Peak
5441.85	43.09	34.3	54	-10.91	34.35	8.48	34.04	200	130	Average
5441.85	53.79	45	74	-20.21	34.35	8.48	34.04	200	130	Peak
*10380	52.98	38.63	68.2	-15.22	37.13	12.36	35.14	197	1	Peak
Antenna 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**
5150	52.8	44.55	54	-1.2	34.12	8.13	34	103	350	Average
5150	65.44	57.19	74	-8.56	34.12	8.13	34	103	350	Peak
5190	93.58	85.24			34.15	8.19	34	103	350	Average
5190	100.45	92.11			34.15	8.19	34	103	350	Peak
5437.56	43.2	34.41	54	-10.8	34.35	8.48	34.04	103	350	Average
5437.56	53.59	44.8	74	-20.41	34.35	8.48	34.04	103	350	Peak
*10380	53.75	39.4	68.2	-14.45	37.13	12.36	35.14	113	326	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5112.95	43.16	34.96	54	-10.84	34.09	8.1	33.99	200	130	Average
5112.95	54.52	46.32	74	-19.48	34.09	8.1	33.99	200	130	Peak
5230	89.74	81.34			34.19	8.22	34.01	200	130	Average
5230	96.69	88.29			34.19	8.22	34.01	200	130	Peak
5459.34	43.04	34.22	54	-10.96	34.36	8.51	34.05	200	130	Average
5459.34	53.92	45.1	74	-20.08	34.36	8.51	34.05	200	130	Peak
*10460	53.57	39.06	68.2	-14.63	37.17	12.53	35.19	197	199	Peak
Antenna 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**
5148.35	44.49	36.24	54	-9.51	34.12	8.13	34	103	350	Average
5148.35	55.2	46.95	74	-18.8	34.12	8.13	34	103	350	Peak
5230	96.77	88.37			34.19	8.22	34.01	103	350	Average
5230	103.21	94.81			34.19	8.22	34.01	103	350	Peak
5365.51	43.75	35.11	54	-10.25	34.29	8.38	34.03	103	350	Average
5365.51	54.31	45.67	74	-19.69	34.29	8.38	34.03	103	350	Peak
*10460	53.39	38.88	68.2	-14.81	37.17	12.53	35.19	118	146	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5755	91.44	82.23			34.66	8.66	34.11	100	326	Average
5755	98.12	88.91			34.66	8.66	34.11	100	326	Peak
11510	48.14	33.03	54	-5.86	37.9	12.6	35.39	187	7	Average
11510	55.09	39.98	74	-18.91	37.9	12.6	35.39	187	7	Peak
Antenna 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**
5755	96.74	87.53			34.66	8.66	34.11	100	251	Average
5755	103.49	94.28			34.66	8.66	34.11	100	251	Peak
11510	48.34	33.23	54	-5.66	37.9	12.6	35.39	134	255	Average
11510	55.08	39.97	74	-18.92	37.9	12.6	35.39	134	255	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5631.25	53.89	44.84	68.2	-14.31	34.52	8.62	34.09	100	326	Peak
5656.45	51.97	42.88	72.97	-21	34.56	8.63	34.1	100	326	Peak
5921.05	52.4	43.02	71.12	-18.72	34.81	8.73	34.16	100	326	Peak
*6000.85	54.46	44.97	68.2	-13.74	34.9	8.76	34.17	100	326	Peak
Antenna 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**
*5573.5	55.64	46.65	68.2	-12.56	34.47	8.59	34.07	100	251	Peak
5654.35	53.9	44.81	71.42	-17.52	34.56	8.63	34.1	100	251	Peak
5924.2	54.2	44.8	68.79	-14.59	34.83	8.73	34.16	100	251	Peak
*5933.65	54.57	45.17	68.2	-13.63	34.83	8.73	34.16	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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
5795	90.33	81.09			34.69	8.68	34.13	100	326	Average
5795	97.73	88.49			34.69	8.68	34.13	100	326	Peak
11590	48.65	33.28	54	-5.35	38.02	12.72	35.37	154	206	Average
11590	56.79	41.42	74	-17.21	38.02	12.72	35.37	154	206	Peak
Antenna 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
5795	95.47	86.23			34.69	8.68	34.13	100	251	Average
5795	102.66	93.42			34.69	8.68	34.13	100	251	Peak
11590	48.4	33.03	54	-5.6	38.02	12.72	35.37	134	322	Average
11590	56.33	40.96	74	-17.67	38.02	12.72	35.37	134	322	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5517.325	54.73	45.8	68.2	-13.47	34.42	8.57	34.06	100	326	Peak
5652.25	50.8	41.71	69.86	-19.06	34.56	8.62	34.09	100	326	Peak
5919.475	52.48	43.1	72.29	-19.81	34.81	8.73	34.16	100	326	Peak
*6015.025	53.97	44.47	68.2	-14.23	34.92	8.76	34.18	100	326	Peak
Antenna 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
*5620.75	54.85	45.8	68.2	-13.35	34.52	8.61	34.08	100	251	Peak
5656.45	53.54	44.45	72.97	-19.43	34.56	8.63	34.1	100	251	Peak
5918.95	52.91	43.53	72.68	-19.77	34.81	8.73	34.16	100	251	Peak
*6018.7	54.72	45.21	68.2	-13.48	34.92	8.77	34.18	100	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

Mode B

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5145.95	43.42	35.17	54	-10.58	34.12	8.13	34	100	335	Average
5145.95	54.27	46.02	74	-19.73	34.12	8.13	34	100	335	Peak
5180	90.55	82.24			34.15	8.16	34	100	335	Average
5180	97.96	89.65			34.15	8.16	34	100	335	Peak
*10360	54	39.7	68.2	-14.2	37.12	12.3	35.12	178	112	Peak
Antenna 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**
5149.85	45.2	36.95	54	-8.8	34.12	8.13	34	218	131	Average
5149.85	55.33	47.08	74	-18.67	34.12	8.13	34	218	131	Peak
5180	96.42	88.11			34.15	8.16	34	218	131	Average
5180	103.38	95.07			34.15	8.16	34	218	131	Peak
*10360	54.54	40.24	68.2	-13.66	37.12	12.3	35.12	196	46	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5137.7	43.2	34.95	54	-10.8	34.11	8.13	33.99	100	335	Average
5137.7	53.81	45.56	74	-20.19	34.11	8.13	33.99	100	335	Peak
5200	90.55	82.2			34.16	8.19	34	100	335	Average
5200	97.17	88.82			34.16	8.19	34	100	335	Peak
5459.12	43.04	34.22	54	-10.96	34.36	8.51	34.05	100	335	Average
5459.12	53.67	44.85	74	-20.33	34.36	8.51	34.05	100	335	Peak
*10400	53.94	39.6	68.2	-14.26	37.14	12.36	35.16	127	86	Peak
Antenna 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**
5130.8	44.35	36.13	54	-9.65	34.11	8.1	33.99	218	131	Average
5130.8	54.98	46.76	74	-19.02	34.11	8.1	33.99	218	131	Peak
5200	96.54	88.19			34.16	8.19	34	218	131	Average
5200	103.57	95.22			34.16	8.19	34	218	131	Peak
5446.8	43.27	34.44	54	-10.73	34.36	8.51	34.04	218	131	Average
5446.8	53.37	44.54	74	-20.63	34.36	8.51	34.04	218	131	Peak
*10400	53.39	39.05	68.2	-14.81	37.14	12.36	35.16	137	190	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5240	90.87	82.43			34.19	8.26	34.01	100	335	Average
5240	97.04	88.6			34.19	8.26	34.01	100	335	Peak
5419.63	43.04	34.27	54	-10.96	34.33	8.48	34.04	100	335	Average
5419.63	53.56	44.79	74	-20.44	34.33	8.48	34.04	100	335	Peak
*10480	54.47	39.96	68.2	-13.73	37.19	12.53	35.21	152	186	Peak
Antenna 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**
5240	96.55	88.11			34.19	8.26	34.01	218	131	Average
5240	103.63	95.19			34.19	8.26	34.01	218	131	Peak
5359.13	43.15	34.52	54	-10.85	34.28	8.38	34.03	218	131	Average
5359.13	53.66	45.03	74	-20.34	34.28	8.38	34.03	218	131	Peak
*10480	53.15	38.64	68.2	-15.05	37.19	12.53	35.21	139	61	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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
5745	89.66	80.47			34.64	8.66	34.11	100	339	Average
5745	96.59	87.4			34.64	8.66	34.11	100	339	Peak
11490	45.27	30.15	54	-8.73	37.89	12.62	35.39	175	144	Average
11490	54.75	39.63	74	-19.25	37.89	12.62	35.39	175	144	Peak
Antenna 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
5745	95.76	86.57			34.64	8.66	34.11	100	118	Average
5745	102.55	93.36			34.64	8.66	34.11	100	118	Peak
11490	45.62	30.5	54	-8.38	37.89	12.62	35.39	137	165	Average
11490	54.35	39.23	74	-19.65	37.89	12.62	35.39	137	165	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5627.575	55.11	46.05	68.2	-13.09	34.52	8.62	34.08	100	339	Peak
5652.775	52.89	43.79	70.25	-17.36	34.56	8.63	34.09	100	339	Peak
5918.95	52.73	43.35	72.68	-19.95	34.81	8.73	34.16	100	339	Peak
*5991.4	55.4	45.91	68.2	-12.8	34.9	8.76	34.17	100	339	Peak
Antenna 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
*5637.55	54.09	45.02	68.2	-14.11	34.54	8.62	34.09	100	118	Peak
5653.3	52.61	43.51	70.64	-18.03	34.56	8.63	34.09	100	118	Peak
5921.05	52.6	43.22	71.12	-18.52	34.81	8.73	34.16	100	118	Peak
*5933.125	54.04	44.64	68.2	-14.16	34.83	8.73	34.16	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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**
5785	89.76	80.53			34.68	8.68	34.13	100	339	Average
5785	96.12	86.89			34.68	8.68	34.13	100	339	Peak
11570	46.08	30.77	54	-7.92	38	12.68	35.37	125	162	Average
11570	56	40.69	74	-18	38	12.68	35.37	125	162	Peak
Antenna 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**
5785	95.82	86.59			34.68	8.68	34.13	100	118	Average
5785	102.29	93.06			34.68	8.68	34.13	100	118	Peak
11570	45.73	30.42	54	-8.27	38	12.68	35.37	105	229	Average
11570	55.01	39.7	74	-18.99	38	12.68	35.37	105	229	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5585.05	54.09	45.08	68.2	-14.11	34.49	8.6	34.08	100	339	Peak
5658.025	53.21	44.12	74.14	-20.93	34.56	8.63	34.1	100	339	Peak
5921.575	53.19	43.79	70.73	-17.54	34.83	8.73	34.16	100	339	Peak
*5984.575	55.52	46.06	68.2	-12.68	34.88	8.75	34.17	100	339	Peak
Antenna 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**
*5587.15	54.04	45.03	68.2	-14.16	34.49	8.6	34.08	100	118	Peak
5652.25	51.78	42.69	69.86	-18.08	34.56	8.62	34.09	100	118	Peak
5922.625	54.12	44.72	69.96	-15.84	34.83	8.73	34.16	100	118	Peak
*5951.5	54.75	45.32	68.2	-13.45	34.85	8.74	34.16	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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
5825	89.52	80.23			34.73	8.69	34.13	100	339	Average
5825	96.24	86.95			34.73	8.69	34.13	100	339	Peak
11650	45.91	30.38	54	-8.09	38.09	12.8	35.36	137	46	Average
11650	55.26	39.73	74	-18.74	38.09	12.8	35.36	137	46	Peak
Antenna 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
5825	95.88	86.59			34.73	8.69	34.13	100	118	Average
5825	102.7	93.41			34.73	8.69	34.13	100	118	Peak
11650	44.83	29.3	54	-9.17	38.09	12.8	35.36	156	234	Average
11650	54.29	38.76	74	-19.71	38.09	12.8	35.36	156	234	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5523.1	53.54	44.6	68.2	-14.66	34.42	8.58	34.06	100	339	Peak
5652.25	51.18	42.09	69.86	-18.68	34.56	8.62	34.09	100	339	Peak
5923.675	54.1	44.7	69.18	-15.08	34.83	8.73	34.16	100	339	Peak
*5952.025	53.66	44.23	68.2	-14.54	34.85	8.74	34.16	100	339	Peak
Antenna 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
*5608.15	53.58	44.55	68.2	-14.62	34.5	8.61	34.08	100	118	Peak
5653.825	51.18	42.09	71.03	-19.85	34.56	8.63	34.1	100	118	Peak
5922.625	53.74	44.34	69.96	-16.22	34.83	8.73	34.16	100	118	Peak
*5928.925	56.47	47.07	68.2	-11.73	34.83	8.73	34.16	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5150	43.25	35	54	-10.75	34.12	8.13	34	100	335	Average
5150	53.9	45.65	74	-20.1	34.12	8.13	34	100	335	Peak
5180	88.33	80.02			34.15	8.16	34	100	335	Average
5180	95.76	87.45			34.15	8.16	34	100	335	Peak
*10360	53.88	39.58	68.2	-14.32	37.12	12.3	35.12	158	126	Peak
Antenna 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**
5149.7	45.23	36.98	54	-8.77	34.12	8.13	34	218	131	Average
5149.7	54.51	46.26	74	-19.49	34.12	8.13	34	218	131	Peak
5180	94.77	86.46			34.15	8.16	34	218	131	Average
5180	101.58	93.27			34.15	8.16	34	218	131	Peak
*10360	52.53	38.23	68.2	-15.67	37.12	12.3	35.12	122	131	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5144.3	43.27	35.02	54	-10.73	34.12	8.13	34	100	335	Average
5144.3	54.01	45.76	74	-19.99	34.12	8.13	34	100	335	Peak
5200	88.59	80.24			34.16	8.19	34	100	335	Average
5200	95.59	87.24			34.16	8.19	34	100	335	Peak
5443.17	43.04	34.25	54	-10.96	34.35	8.48	34.04	100	335	Average
5443.17	53.33	44.54	74	-20.67	34.35	8.48	34.04	100	335	Peak
*10400	53.46	39.12	68.2	-14.74	37.14	12.36	35.16	121	148	Peak
Antenna 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**
5150	45.14	36.89	54	-8.86	34.12	8.13	34	218	131	Average
5150	56.29	48.04	74	-17.71	34.12	8.13	34	218	131	Peak
5200	94.47	86.12			34.16	8.19	34	218	131	Average
5200	101.06	92.71			34.16	8.19	34	218	131	Peak
5449.77	43.02	34.2	54	-10.98	34.36	8.51	34.05	218	131	Average
5449.77	53.92	45.1	74	-20.08	34.36	8.51	34.05	218	131	Peak
*10400	53.44	39.1	68.2	-14.76	37.14	12.36	35.16	123	340	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5240	89.77	81.33			34.19	8.26	34.01	100	335	Average
5240	96.94	88.5			34.19	8.26	34.01	100	335	Peak
5350.77	43.21	34.58	54	-10.79	34.28	8.38	34.03	100	335	Average
5350.77	53.36	44.73	74	-20.64	34.28	8.38	34.03	100	335	Peak
*10480	53.17	38.66	68.2	-15.03	37.19	12.53	35.21	193	327	Peak
Antenna 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**
5240	95.46	87.02			34.19	8.26	34.01	218	131	Average
5240	102.78	94.34			34.19	8.26	34.01	218	131	Peak
5350.77	43.2	34.57	54	-10.8	34.28	8.38	34.03	218	131	Average
5350.77	54.01	45.38	74	-19.99	34.28	8.38	34.03	218	131	Peak
*10480	54.32	39.81	68.2	-13.88	37.19	12.53	35.21	150	112	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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
5745	89.52	80.33			34.64	8.66	34.11	100	339	Average
5745	96.07	86.88			34.64	8.66	34.11	100	339	Peak
11490	45.17	30.05	54	-8.83	37.89	12.62	35.39	186	219	Average
11490	54.06	38.94	74	-19.94	37.89	12.62	35.39	186	219	Peak
Antenna 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
5745	95.14	85.95			34.64	8.66	34.11	100	118	Average
5745	102.09	92.9			34.64	8.66	34.11	100	118	Peak
11490	45.63	30.51	54	-8.37	37.89	12.62	35.39	106	87	Average
11490	55.16	40.04	74	-18.84	37.89	12.62	35.39	106	87	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5591.35	54	44.99	68.2	-14.2	34.49	8.6	34.08	100	339	Peak
5656.975	53.53	44.44	73.36	-19.83	34.56	8.63	34.1	100	339	Peak
5921.05	53.33	43.95	71.12	-17.79	34.81	8.73	34.16	100	339	Peak
*5960.95	54.75	45.31	68.2	-13.45	34.87	8.74	34.17	100	339	Peak
Antenna 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
*5626	54.6	45.55	68.2	-13.6	34.52	8.61	34.08	100	118	Peak
5652.25	54.25	45.16	69.86	-15.61	34.56	8.62	34.09	100	118	Peak
5919.475	53.18	43.8	72.29	-19.11	34.81	8.73	34.16	100	118	Peak
*5983.525	54.83	45.37	68.2	-13.37	34.88	8.75	34.17	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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
5785	89.99	80.76			34.68	8.68	34.13	100	339	Average
5785	96.41	87.18			34.68	8.68	34.13	100	339	Peak
11570	45.61	30.3	54	-8.39	38	12.68	35.37	168	190	Average
11570	54.11	38.8	74	-19.89	38	12.68	35.37	168	190	Peak
Antenna 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
5785	95.77	86.54			34.68	8.68	34.13	100	118	Average
5785	102.65	93.42			34.68	8.68	34.13	100	118	Peak
11570	45.23	29.92	54	-8.77	38	12.68	35.37	136	111	Average
11570	54.68	39.37	74	-19.32	38	12.68	35.37	136	111	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5634.4	53.91	44.84	68.2	-14.29	34.54	8.62	34.09	100	339	Peak
5659.075	52.94	43.85	74.92	-21.98	34.56	8.63	34.1	100	339	Peak
5920	53.46	44.08	71.9	-18.44	34.81	8.73	34.16	100	339	Peak
*5957.275	54.36	44.91	68.2	-13.84	34.87	8.74	34.16	100	339	Peak
Antenna 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
*5625.475	53.83	44.78	68.2	-14.37	34.52	8.61	34.08	100	118	Peak
5652.25	53.22	44.13	69.86	-16.64	34.56	8.62	34.09	100	118	Peak
5922.625	54.9	45.5	69.96	-15.06	34.83	8.73	34.16	100	118	Peak
*5980.375	54.46	45	68.2	-13.74	34.88	8.75	34.17	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

<Spurious Emission>

Antenna 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
5825	89.63	80.34			34.73	8.69	34.13	100	339	Average
5825	96.59	87.3			34.73	8.69	34.13	100	339	Peak
11650	45.57	30.04	54	-8.43	38.09	12.8	35.36	127	65	Average
11650	55.08	39.55	74	-18.92	38.09	12.8	35.36	127	65	Peak
Antenna 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
5825	95.44	86.15			34.73	8.69	34.13	100	118	Average
5825	102.84	93.55			34.73	8.69	34.13	100	118	Peak
11650	45.87	30.34	54	-8.13	38.09	12.8	35.36	146	334	Average
11650	55.54	40.01	74	-18.46	38.09	12.8	35.36	146	334	Peak

<Out of Band Emission (OOBE)>

Antenna 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
*5574.025	53.92	44.93	68.2	-14.28	34.47	8.59	34.07	100	339	Peak
5654.875	51.96	42.87	71.81	-19.85	34.56	8.63	34.1	100	339	Peak
5917.375	53.08	43.7	73.84	-20.76	34.81	8.73	34.16	100	339	Peak
*5960.95	54.45	45.01	68.2	-13.75	34.87	8.74	34.17	100	339	Peak
Antenna 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
*5648.05	53.79	44.72	68.2	-14.41	34.54	8.62	34.09	100	118	Peak
5658.025	53.17	44.08	74.14	-20.97	34.56	8.63	34.1	100	118	Peak
5918.95	54.72	45.34	72.68	-17.96	34.81	8.73	34.16	100	118	Peak
*5952.025	54.65	45.22	68.2	-13.55	34.85	8.74	34.16	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5150	47.2	38.95	54	-6.8	34.12	8.13	34	100	335	Average
5150	58.03	49.78	74	-15.97	34.12	8.13	34	100	335	Peak
5190	86.36	78.02			34.15	8.19	34	100	335	Average
5190	93.89	85.55			34.15	8.19	34	100	335	Peak
5448.67	43.09	34.26	54	-10.91	34.36	8.51	34.04	100	335	Average
5448.67	53.25	44.42	74	-20.75	34.36	8.51	34.04	100	335	Peak
*10380	53.19	38.84	68.2	-15.01	37.13	12.36	35.14	124	186	Peak
Antenna 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**
5149.7	52.99	44.74	54	-1.01	34.12	8.13	34	218	131	Average
5149.7	65.6	57.35	74	-8.4	34.12	8.13	34	218	131	Peak
5190	92.76	84.42			34.15	8.19	34	218	131	Average
5190	99.8	91.46			34.15	8.19	34	218	131	Peak
5444.82	43.09	34.27	54	-10.91	34.35	8.51	34.04	218	131	Average
5444.82	53.73	44.91	74	-20.27	34.35	8.51	34.04	218	131	Peak
*10380	54.08	39.73	68.2	-14.12	37.13	12.36	35.14	135	229	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
5123	43.09	34.87	54	-10.91	34.11	8.1	33.99	100	335	Average
5123	54.05	45.83	74	-19.95	34.11	8.1	33.99	100	335	Peak
5230	88.57	80.17			34.19	8.22	34.01	100	335	Average
5230	95.79	87.39			34.19	8.22	34.01	100	335	Peak
5443.61	43.16	34.37	54	-10.84	34.35	8.48	34.04	100	335	Average
5443.61	54.01	45.22	74	-19.99	34.35	8.48	34.04	100	335	Peak
*10460	53.81	39.3	68.2	-14.39	37.17	12.53	35.19	139	261	Peak
Antenna 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**
5150	44.97	36.72	54	-9.03	34.12	8.13	34	218	131	Average
5150	54.57	46.32	74	-19.43	34.12	8.13	34	218	131	Peak
5230	94.5	86.1			34.19	8.22	34.01	218	131	Average
5230	101.76	93.36			34.19	8.22	34.01	218	131	Peak
5429.53	43.19	34.4	54	-10.81	34.35	8.48	34.04	218	131	Average
5429.53	54.34	45.55	74	-19.66	34.35	8.48	34.04	218	131	Peak
*10460	54.05	39.54	68.2	-14.15	37.17	12.53	35.19	187	134	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5755	89.26	80.05			34.66	8.66	34.11	100	339	Average
5755	96.5	87.29			34.66	8.66	34.11	100	339	Peak
11510	45.28	30.17	54	-8.72	37.9	12.6	35.39	138	268	Average
11510	54.86	39.75	74	-19.14	37.9	12.6	35.39	138	268	Peak
Antenna 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**
5755	95.77	86.56			34.66	8.66	34.11	100	118	Average
5755	102.92	93.71			34.66	8.66	34.11	100	118	Peak
11510	45.37	30.26	54	-8.63	37.9	12.6	35.39	128	267	Average
11510	54.83	39.72	74	-19.17	37.9	12.6	35.39	128	267	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5580.85	54.05	45.06	68.2	-14.15	34.47	8.6	34.08	100	339	Peak
5657.5	53.03	43.94	73.75	-20.72	34.56	8.63	34.1	100	339	Peak
5918.95	54.78	45.4	72.68	-17.9	34.81	8.73	34.16	100	339	Peak
*6017.125	54.91	45.4	68.2	-13.29	34.92	8.77	34.18	100	339	Peak
Antenna 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**
*5623.9	54.5	45.45	68.2	-13.7	34.52	8.61	34.08	100	118	Peak
5654.35	52.84	43.75	71.42	-18.58	34.56	8.63	34.1	100	118	Peak
5924.2	53.35	43.95	68.79	-15.44	34.83	8.73	34.16	100	118	Peak
*5995.075	54.67	45.18	68.2	-13.53	34.9	8.76	34.17	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5795	89.76	80.52			34.69	8.68	34.13	100	339	Average
5795	96.42	87.18			34.69	8.68	34.13	100	339	Peak
11590	45.82	30.45	54	-8.18	38.02	12.72	35.37	142	150	Average
11590	55.15	39.78	74	-18.85	38.02	12.72	35.37	142	150	Peak
Antenna 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**
5795	95.74	86.5			34.69	8.68	34.13	100	118	Average
5795	102.98	93.74			34.69	8.68	34.13	100	118	Peak
11590	46.33	30.96	54	-7.67	38.02	12.72	35.37	178	305	Average
11590	55.98	40.61	74	-18.02	38.02	12.72	35.37	178	305	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5593.45	53.99	44.98	68.2	-14.21	34.49	8.6	34.08	100	339	Peak
5654.875	52.8	43.71	71.81	-19.01	34.56	8.63	34.1	100	339	Peak
5921.05	53.05	43.67	71.12	-18.07	34.81	8.73	34.16	100	339	Peak
*5970.925	54.5	45.05	68.2	-13.7	34.87	8.75	34.17	100	339	Peak
Antenna 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**
*5585.05	54.67	45.66	68.2	-13.53	34.49	8.6	34.08	100	118	Peak
5654.875	54.22	45.13	71.81	-17.59	34.56	8.63	34.1	100	118	Peak
5922.625	54.14	44.74	69.96	-15.82	34.83	8.73	34.16	100	118	Peak
*5950.975	55.01	45.58	68.2	-13.19	34.85	8.74	34.16	100	118	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

Mode C

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5149.55	43.92	35.67	54	-10.08	34.12	8.13	34	100	3	Average
5149.55	54.46	46.21	74	-19.54	34.12	8.13	34	100	3	Peak
5180	93.85	85.54			34.15	8.16	34	100	3	Average
5180	100.14	91.83			34.15	8.16	34	100	3	Peak
*10360	52.88	38.58	68.2	-15.32	37.12	12.3	35.12	117	17	Peak
Antenna 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**
5149.7	44.3	36.05	54	-9.7	34.12	8.13	34	154	142	Average
5149.7	57.31	49.06	74	-16.69	34.12	8.13	34	154	142	Peak
5180	94.45	86.14			34.15	8.16	34	154	142	Average
5180	101.69	93.38			34.15	8.16	34	154	142	Peak
*10360	52.71	38.41	68.2	-15.49	37.12	12.3	35.12	112	300	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5146.4	42.9	34.65	54	-11.1	34.12	8.13	34	100	3	Average
5146.4	53.36	45.11	74	-20.64	34.12	8.13	34	100	3	Peak
5200	93.65	85.3			34.16	8.19	34	100	3	Average
5200	100.12	91.77			34.16	8.19	34	100	3	Peak
5443.5	42.53	33.74	54	-11.47	34.35	8.48	34.04	100	3	Average
5443.5	52.82	44.03	74	-21.18	34.35	8.48	34.04	100	3	Peak
*10400	54.22	39.88	68.2	-13.98	37.14	12.36	35.16	165	29	Peak
Antenna 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**
5148.5	42.75	34.5	54	-11.25	34.12	8.13	34	154	142	Average
5148.5	53.79	45.54	74	-20.21	34.12	8.13	34	154	142	Peak
5200	94.74	86.39			34.16	8.19	34	154	142	Average
5200	101.56	93.21			34.16	8.19	34	154	142	Peak
5460	42.38	33.56	54	-11.62	34.36	8.51	34.05	154	142	Average
5460	53.08	44.26	74	-20.92	34.36	8.51	34.05	154	142	Peak
*10400	52.83	38.49	68.2	-15.37	37.14	12.36	35.16	137	114	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5240	93.99	85.55			34.19	8.26	34.01	100	3	Average
5240	100.03	91.59			34.19	8.26	34.01	100	3	Peak
5351.54	42.55	33.92	54	-11.45	34.28	8.38	34.03	100	3	Average
5351.54	53.64	45.01	74	-20.36	34.28	8.38	34.03	100	3	Peak
*10480	54.33	39.82	68.2	-13.87	37.19	12.53	35.21	155	256	Peak
Antenna 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**
5240	94.57	86.13			34.19	8.26	34.01	152	142	Average
5240	101.62	93.18			34.19	8.26	34.01	152	142	Peak
5456.26	42.49	33.67	54	-11.51	34.36	8.51	34.05	152	142	Average
5456.26	53.08	44.26	74	-20.92	34.36	8.51	34.05	152	142	Peak
*10480	53.23	38.72	68.2	-14.97	37.19	12.53	35.21	130	25	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5745	92.54	83.35			34.64	8.66	34.11	107	257	Average
5745	99.31	90.12			34.64	8.66	34.11	107	257	Peak
11490	47.26	32.14	54	-6.74	37.89	12.62	35.39	157	11	Average
11490	54.97	39.85	74	-19.03	37.89	12.62	35.39	157	11	Peak
Antenna 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**
5745	91.74	82.55			34.64	8.66	34.11	100	141	Average
5745	98.52	89.33			34.64	8.66	34.11	100	141	Peak
11490	47.42	32.3	54	-6.58	37.89	12.62	35.39	187	114	Average
11490	54.83	39.71	74	-19.17	37.89	12.62	35.39	187	114	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5626	53.5	44.45	68.2	-14.7	34.52	8.61	34.08	107	257	Peak
5658.55	54.13	45.04	74.53	-20.4	34.56	8.63	34.1	107	257	Peak
5922.625	51.84	42.44	69.96	-18.12	34.83	8.73	34.16	107	257	Peak
*5942.05	53.26	43.83	68.2	-14.94	34.85	8.74	34.16	107	257	Peak
Antenna 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**
*5568.25	53.87	44.88	68.2	-14.33	34.47	8.59	34.07	100	141	Peak
5659.6	52.37	43.28	75.3	-22.93	34.56	8.63	34.1	100	141	Peak
5922.625	51.43	42.03	69.96	-18.53	34.83	8.73	34.16	100	141	Peak
*6012.925	52.62	43.12	68.2	-15.58	34.92	8.76	34.18	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5785	92.33	83.1			34.68	8.68	34.13	107	257	Average
5785	99.19	89.96			34.68	8.68	34.13	107	257	Peak
11570	47.5	32.19	54	-6.5	38	12.68	35.37	195	3	Average
11570	55.67	40.36	74	-18.33	38	12.68	35.37	195	3	Peak
Antenna 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**
5785	91.53	82.3			34.68	8.68	34.13	100	141	Average
5785	98.61	89.38			34.68	8.68	34.13	100	141	Peak
11570	47.51	32.2	54	-6.49	38	12.68	35.37	142	132	Average
11570	53.66	38.35	74	-20.34	38	12.68	35.37	142	132	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5615.5	53.48	44.43	68.2	-14.72	34.52	8.61	34.08	107	257	Peak
5655.925	52.09	43	72.58	-20.49	34.56	8.63	34.1	107	257	Peak
5921.575	51.5	42.1	70.73	-19.23	34.83	8.73	34.16	107	257	Peak
*5936.275	53.24	43.84	68.2	-14.96	34.83	8.73	34.16	107	257	Peak
Antenna 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**
*5521.525	53.67	44.74	68.2	-14.53	34.42	8.57	34.06	100	141	Peak
5656.975	52.36	43.27	73.36	-21	34.56	8.63	34.1	100	141	Peak
5918.425	50.56	41.18	73.07	-22.51	34.81	8.73	34.16	100	141	Peak
*5926.825	53.26	43.86	68.2	-14.94	34.83	8.73	34.16	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5825	93.52	84.23			34.73	8.69	34.13	107	257	Average
5825	100.09	90.8			34.73	8.69	34.13	107	257	Peak
11650	48.07	32.54	54	-5.93	38.09	12.8	35.36	124	21	Average
11650	53.9	38.37	74	-20.1	38.09	12.8	35.36	124	21	Peak
Antenna 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**
5825	92.54	83.25			34.73	8.69	34.13	100	141	Average
5825	99.26	89.97			34.73	8.69	34.13	100	141	Peak
11650	47.72	32.19	54	-6.28	38.09	12.8	35.36	154	166	Average
11650	54.36	38.83	74	-19.64	38.09	12.8	35.36	154	166	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5527.3	53.45	44.52	68.2	-14.75	34.42	8.58	34.07	107	257	Peak
5654.35	51.98	42.89	71.42	-19.44	34.56	8.63	34.1	107	257	Peak
5919.475	51.41	42.03	72.29	-20.88	34.81	8.73	34.16	107	257	Peak
*6010.825	52.63	43.13	68.2	-15.57	34.92	8.76	34.18	107	257	Peak
Antenna 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**
*5623.375	53.5	44.45	68.2	-14.7	34.52	8.61	34.08	100	141	Peak
5654.35	52.56	43.47	71.42	-18.86	34.56	8.63	34.1	100	141	Peak
5917.9	52.28	42.9	73.45	-21.17	34.81	8.73	34.16	100	141	Peak
*6012.925	52.96	43.46	68.2	-15.24	34.92	8.76	34.18	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5149.1	43.31	35.06	54	-10.69	34.12	8.13	34	100	3	Average
5149.1	53.6	45.35	74	-20.4	34.12	8.13	34	100	3	Peak
5180	91.66	83.35			34.15	8.16	34	100	3	Average
5180	98.75	90.44			34.15	8.16	34	100	3	Peak
*10360	52.74	38.44	68.2	-15.46	37.12	12.3	35.12	112	14	Peak
Antenna 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**
5149.85	43.27	35.02	54	-10.73	34.12	8.13	34	152	142	Average
5149.85	54.1	45.85	74	-19.9	34.12	8.13	34	152	142	Peak
5180	92.54	84.23			34.15	8.16	34	152	142	Average
5180	99.72	91.41			34.15	8.16	34	152	142	Peak
*10360	52.46	38.16	68.2	-15.74	37.12	12.3	35.12	112	316	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 40	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5120.15	42.62	34.42	54	-11.38	34.09	8.1	33.99	100	3	Average
5120.15	53.37	45.17	74	-20.63	34.09	8.1	33.99	100	3	Peak
5200	91.47	83.12			34.16	8.19	34	100	3	Average
5200	98.9	90.55			34.16	8.19	34	100	3	Peak
5369.8	42.39	33.72	54	-11.61	34.29	8.41	34.03	100	3	Average
5369.8	52.71	44.04	74	-21.29	34.29	8.41	34.03	100	3	Peak
*10400	54.32	39.98	68.2	-13.88	37.14	12.36	35.16	114	159	Peak
Antenna 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**
5140.1	42.63	34.37	54	-11.37	34.12	8.13	33.99	152	142	Average
5140.1	52.6	44.34	74	-21.4	34.12	8.13	33.99	152	142	Peak
5200	92.2	83.85			34.16	8.19	34	152	142	Average
5200	99.42	91.07			34.16	8.19	34	152	142	Peak
5450.98	42.47	33.65	54	-11.53	34.36	8.51	34.05	152	142	Average
5450.98	54.76	45.94	74	-19.24	34.36	8.51	34.05	152	142	Peak
*10400	52.66	38.32	68.2	-15.54	37.14	12.36	35.16	166	252	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5200 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5240	92.54	84.1			34.19	8.26	34.01	100	3	Average
5240	99.55	91.11			34.19	8.26	34.01	100	3	Peak
5350	42.41	33.78	54	-11.59	34.28	8.38	34.03	100	3	Average
5350	53.29	44.66	74	-20.71	34.28	8.38	34.03	100	3	Peak
*10480	54	39.49	68.2	-14.2	37.19	12.53	35.21	145	14	Peak
Antenna 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**
5240	93.65	85.21			34.19	8.26	34.01	152	142	Average
5240	100.77	92.33			34.19	8.26	34.01	152	142	Peak
5453.62	42.47	33.65	54	-11.53	34.36	8.51	34.05	152	142	Average
5453.62	53.51	44.69	74	-20.49	34.36	8.51	34.05	152	142	Peak
*10480	53.24	38.73	68.2	-14.96	37.19	12.53	35.21	119	346	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5745	93.3	84.11			34.64	8.66	34.11	107	257	Average
5745	100.5	91.31			34.64	8.66	34.11	107	257	Peak
11490	47.37	32.25	54	-6.63	37.89	12.62	35.39	188	118	Average
11490	54.66	39.54	74	-19.34	37.89	12.62	35.39	188	118	Peak
Antenna 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**
5745	92.51	83.32			34.64	8.66	34.11	100	141	Average
5745	99.6	90.41			34.64	8.66	34.11	100	141	Peak
11490	47.41	32.29	54	-6.59	37.89	12.62	35.39	189	222	Average
11490	54.74	39.62	74	-19.26	37.89	12.62	35.39	189	222	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5633.875	53.38	44.31	68.2	-14.82	34.54	8.62	34.09	107	257	Peak
5654.35	51.34	42.25	71.42	-20.08	34.56	8.63	34.1	107	257	Peak
5919.475	51.2	41.82	72.29	-21.09	34.81	8.73	34.16	107	257	Peak
*5977.225	53.15	43.69	68.2	-15.05	34.88	8.75	34.17	107	257	Peak
Antenna 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**
*5649.1	53.41	44.34	68.2	-14.79	34.54	8.62	34.09	100	141	Peak
5655.4	53.9	44.81	72.2	-18.3	34.56	8.63	34.1	100	141	Peak
5916.85	52.64	43.26	74.23	-21.59	34.81	8.73	34.16	100	141	Peak
*5944.675	53.2	43.77	68.2	-15	34.85	8.74	34.16	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5785	93.33	84.1			34.68	8.68	34.13	107	257	Average
5785	100.99	91.76			34.68	8.68	34.13	107	257	Peak
11570	47.41	32.1	54	-6.59	38	12.68	35.37	124	113	Average
11570	55.43	40.12	74	-18.57	38	12.68	35.37	124	113	Peak
Antenna 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**
5785	92.74	83.51			34.68	8.68	34.13	100	141	Average
5785	99.35	90.12			34.68	8.68	34.13	100	141	Peak
11570	48.14	32.83	54	-5.86	38	12.68	35.37	167	199	Average
11570	53.6	38.29	74	-20.4	38	12.68	35.37	167	199	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5635.975	53.89	44.82	68.2	-14.31	34.54	8.62	34.09	107	257	Peak
5655.925	52.45	43.36	72.58	-20.13	34.56	8.63	34.1	107	257	Peak
5916.325	52.02	42.64	74.62	-22.6	34.81	8.73	34.16	107	257	Peak
*5982.475	52.88	43.42	68.2	-15.32	34.88	8.75	34.17	107	257	Peak
Antenna 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**
*5593.45	53.28	44.27	68.2	-14.92	34.49	8.6	34.08	100	141	Peak
5655.4	53.77	44.68	72.2	-18.43	34.56	8.63	34.1	100	141	Peak
5921.05	49.63	40.25	71.12	-21.49	34.81	8.73	34.16	100	141	Peak
*5966.2	54.01	44.56	68.2	-14.19	34.87	8.75	34.17	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5825	93.55	84.26			34.73	8.69	34.13	107	257	Average
5825	100.99	91.7			34.73	8.69	34.13	107	257	Peak
11650	48.18	32.65	54	-5.82	38.09	12.8	35.36	143	132	Average
11650	54	38.47	74	-20	38.09	12.8	35.36	143	132	Peak
Antenna 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**
5825	92.54	83.25			34.73	8.69	34.13	100	141	Average
5825	99.29	90			34.73	8.69	34.13	100	141	Peak
11650	48.29	32.76	54	-5.71	38.09	12.8	35.36	165	115	Average
11650	54.56	39.03	74	-19.44	38.09	12.8	35.36	165	115	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5613.925	53.69	44.66	68.2	-14.51	34.5	8.61	34.08	107	257	Peak
5655.4	53.28	44.19	72.2	-18.92	34.56	8.63	34.1	107	257	Peak
5918.425	51.93	42.55	73.07	-21.14	34.81	8.73	34.16	107	257	Peak
*6009.25	52.6	43.09	68.2	-15.6	34.92	8.76	34.17	107	257	Peak
Antenna 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**
*5622.85	53.63	44.58	68.2	-14.57	34.52	8.61	34.08	100	141	Peak
5654.35	51.93	42.84	71.42	-19.49	34.56	8.63	34.1	100	141	Peak
5923.675	50.8	41.4	69.18	-18.38	34.83	8.73	34.16	100	141	Peak
*5932.075	52.77	43.37	68.2	-15.43	34.83	8.73	34.16	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5149.25	48.2	39.95	54	-5.8	34.12	8.13	34	100	3	Average
5149.25	59.52	51.27	74	-14.48	34.12	8.13	34	100	3	Peak
5190	89.65	81.31			34.15	8.19	34	100	3	Average
5190	96.73	88.39			34.15	8.19	34	100	3	Peak
5442.62	42.59	33.8	54	-11.41	34.35	8.48	34.04	100	3	Average
5442.62	54.25	45.46	74	-19.75	34.35	8.48	34.04	100	3	Peak
*10380	52.87	38.52	68.2	-15.33	37.13	12.36	35.14	113	21	Peak
Antenna 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**
5150	47.23	38.98	54	-6.77	34.12	8.13	34	152	142	Average
5150	60.71	52.46	74	-13.29	34.12	8.13	34	152	142	Peak
5190	90.36	82.02			34.15	8.19	34	152	142	Average
5190	97.71	89.37			34.15	8.19	34	152	142	Peak
5446.47	42.54	33.71	54	-11.46	34.36	8.51	34.04	152	142	Average
5446.47	53.14	44.31	74	-20.86	34.36	8.51	34.04	152	142	Peak
*10380	52.4	38.05	68.2	-15.8	37.13	12.36	35.14	106	159	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5190 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna 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**
5148.5	42.67	34.42	54	-11.33	34.12	8.13	34	100	3	Average
5148.5	53.17	44.92	74	-20.83	34.12	8.13	34	100	3	Peak
5230	90.85	82.45			34.19	8.22	34.01	100	3	Average
5230	97.77	89.37			34.19	8.22	34.01	100	3	Peak
5352.09	42.47	33.84	54	-11.53	34.28	8.38	34.03	100	3	Average
5352.09	53.02	44.39	74	-20.98	34.28	8.38	34.03	100	3	Peak
*10460	53.13	38.62	68.2	-15.07	37.17	12.53	35.19	177	195	Peak
Antenna 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**
5144.9	42.47	34.22	54	-11.53	34.12	8.13	34	152	142	Average
5144.9	53.78	45.53	74	-20.22	34.12	8.13	34	152	142	Peak
5230	91.57	83.17			34.19	8.22	34.01	152	142	Average
5230	98.48	90.08			34.19	8.22	34.01	152	142	Peak
5396.42	42.55	33.83	54	-11.45	34.32	8.44	34.04	152	142	Average
5396.42	53.34	44.62	74	-20.66	34.32	8.44	34.04	152	142	Peak
*10460	53.01	38.5	68.2	-15.19	37.17	12.53	35.19	145	315	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5230 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5755	93.65	84.44			34.66	8.66	34.11	107	257	Average
5755	100.13	90.92			34.66	8.66	34.11	107	257	Peak
11510	48.25	33.14	54	-5.75	37.9	12.6	35.39	184	50	Average
11510	55.19	40.08	74	-18.81	37.9	12.6	35.39	184	50	Peak
Antenna 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**
5755	92.46	83.25			34.66	8.66	34.11	100	141	Average
5755	99.03	89.82			34.66	8.66	34.11	100	141	Peak
11510	48.14	33.03	54	-5.86	37.9	12.6	35.39	110	321	Average
11510	54.82	39.71	74	-19.18	37.9	12.6	35.39	110	321	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5647.525	53	43.93	68.2	-15.2	34.54	8.62	34.09	100	141	Peak
5655.925	52.95	43.86	72.58	-19.63	34.56	8.63	34.1	100	141	Peak
5917.375	51.2	41.82	73.84	-22.64	34.81	8.73	34.16	100	141	Peak
*5965.675	53.67	44.22	68.2	-14.53	34.87	8.75	34.17	100	141	Peak
Antenna 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**
*5626	53.68	44.63	68.2	-14.52	34.52	8.61	34.08	107	257	Peak
5653.825	51.98	42.89	71.03	-19.05	34.56	8.63	34.1	107	257	Peak
5916.325	51.6	42.22	74.62	-23.02	34.81	8.73	34.16	107	257	Peak
*5988.25	52.96	43.5	68.2	-15.24	34.88	8.75	34.17	107	257	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The emission levels of other frequencies were very low against the limit

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

<Spurious Emission>

Antenna 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**
5795	93.53	84.29			34.69	8.68	34.13	107	257	Average
5795	100.9	91.66			34.69	8.68	34.13	107	257	Peak
11590	48.62	33.25	54	-5.38	38.02	12.72	35.37	113	14	Average
11590	53.63	38.26	74	-20.37	38.02	12.72	35.37	113	14	Peak
Antenna 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**
5795	92.84	83.6			34.69	8.68	34.13	100	141	Average
5795	99.72	90.48			34.69	8.68	34.13	100	141	Peak
11590	48.61	33.24	54	-5.39	38.02	12.72	35.37	190	314	Average
11590	54.19	38.82	74	-19.81	38.02	12.72	35.37	190	314	Peak

<Out of Band Emission (OOBE)>

Antenna 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**
*5601.325	54.11	45.08	68.2	-14.09	34.5	8.61	34.08	107	257	Peak
5655.925	53.27	44.18	72.58	-19.31	34.56	8.63	34.1	107	257	Peak
5916.325	51.75	42.37	74.62	-22.87	34.81	8.73	34.16	107	257	Peak
*5998.225	53.76	44.27	68.2	-14.44	34.9	8.76	34.17	107	257	Peak
Antenna 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**
*5612.35	53.52	44.49	68.2	-14.68	34.5	8.61	34.08	100	141	Peak
5652.25	53.94	44.85	69.86	-15.92	34.56	8.62	34.09	100	141	Peak
5917.9	52.48	43.1	73.45	-20.97	34.81	8.73	34.16	100	141	Peak
*5979.85	52.91	43.45	68.2	-15.29	34.88	8.75	34.17	100	141	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. 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:

Mode A

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
42.96	9.26	26.76	40	-30.74	13.98	0.74	32.22	154	4	Peak
215.76	9.59	28.9	43.5	-33.91	11.27	1.65	32.23	188	8	Peak
250.86	9.55	27.37	46	-36.45	12.34	1.94	32.1	124	299	Peak
482	15.84	29.29	46	-30.16	16.1	2.56	32.11	124	300	Peak
717.2	19.88	29.41	46	-26.12	19.47	3.11	32.11	199	85	Peak
854.4	22.17	29.41	46	-23.83	21.08	3.44	31.76	173	4	Peak
Antenna 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**
48.9	10.92	27.68	40	-29.08	14.56	0.9	32.22	145	11	Peak
198.21	7.59	27.25	43.5	-35.91	11.02	1.61	32.29	198	354	Peak
290.28	10.9	28.14	46	-35.1	12.86	2.03	32.13	124	203	Peak
521.2	15.82	28.65	46	-30.18	16.61	2.7	32.14	124	166	Peak
687.8	19.8	29.8	46	-26.2	19.05	3.05	32.1	187	88	Peak
823.6	20.46	28.32	46	-25.54	20.69	3.38	31.93	124	206	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

Mode B

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
46.2	10.44	27.3	40	-29.56	14.46	0.9	32.22	105	104	Peak
99.39	14.71	33.41	43.5	-28.79	12.28	1.28	32.26	197	33	Peak
158.25	7.41	29.49	43.5	-36.09	8.67	1.52	32.27	114	148	Peak
491.8	15.47	28.7	46	-30.53	16.24	2.63	32.1	118	246	Peak
582.8	16.59	28.29	46	-29.41	17.68	2.82	32.2	195	155	Peak
717.2	19.88	29.41	46	-26.12	19.47	3.11	32.11	187	311	Peak
Antenna 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**
63.21	10.53	29.26	40	-29.47	12.6	0.9	32.23	163	223	Peak
189.03	9.28	29.38	43.5	-34.22	10.54	1.61	32.25	105	161	Peak
300	10.9	27.95	46	-35.1	13.06	2.03	32.14	200	108	Peak
392.4	14.84	29.85	46	-31.16	14.85	2.34	32.2	124	146	Peak
627.6	19.07	30.12	46	-26.93	18.19	2.93	32.17	157	190	Peak
760.6	20.87	29.86	46	-25.13	19.92	3.22	32.13	187	89	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

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	3.3 Vdc	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Harry Hsueh

Antenna 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**
46.2	10.44	27.3	40	-29.56	14.46	0.9	32.22	105	104	Peak
99.39	14.71	33.41	43.5	-28.79	12.28	1.28	32.26	197	33	Peak
158.25	7.41	29.49	43.5	-36.09	8.67	1.52	32.27	114	148	Peak
491.8	15.47	28.7	46	-30.53	16.24	2.63	32.1	118	246	Peak
582.8	16.59	28.29	46	-29.41	17.68	2.82	32.2	195	155	Peak
717.2	19.88	29.41	46	-26.12	19.47	3.11	32.11	187	311	Peak
Antenna 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**
63.21	10.53	29.26	40	-29.47	12.6	0.9	32.23	163	223	Peak
189.03	9.28	29.38	43.5	-34.22	10.54	1.61	32.25	105	161	Peak
300	10.9	27.95	46	-35.1	13.06	2.03	32.14	200	108	Peak
392.4	14.84	29.85	46	-31.16	14.85	2.34	32.2	124	146	Peak
627.6	19.07	30.12	46	-26.93	18.19	2.93	32.17	157	190	Peak
760.6	20.87	29.86	46	-25.13	19.92	3.22	32.13	187	89	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 Transmit Power Measurement

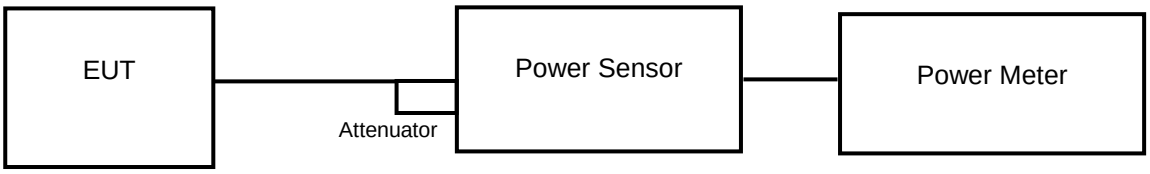
4.2.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125 mW (21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250 mW (24 dBm)
U-NII-2A			250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-2C			250 mW (24 dBm) or 11 dBm + 10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

4.2.2 Test Setup

<Power Output Measurement>



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40)>

Method PM is 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.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

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

4.2.7 Test Results

Power Output:

Mode A

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	24.95	13.97	24	Pass
40	5200	25.23	14.02	24	Pass
48	5240	25.23	14.02	24	Pass
149	5745	19.86	12.98	30	Pass
157	5785	20.94	13.21	30	Pass
165	5825	19.41	12.88	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	20.84	13.19	24	Pass
40	5200	20.89	13.20	24	Pass
48	5240	21.18	13.26	24	Pass
149	5745	19.45	12.89	30	Pass
157	5785	20.65	13.15	30	Pass
165	5825	19.86	12.98	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	12.74	11.05	24	Pass
46	5230	20.65	13.15	24	Pass
151	5755	20.65	13.15	30	Pass
159	5795	20.18	13.05	30	Pass

Mode B

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	24.95	13.97	24	Pass
40	5200	25.23	14.02	24	Pass
48	5240	25.23	14.02	24	Pass
149	5745	19.86	12.98	30	Pass
157	5785	20.94	13.21	30	Pass
165	5825	19.41	12.88	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	20.84	13.19	24	Pass
40	5200	20.89	13.20	24	Pass
48	5240	21.18	13.26	24	Pass
149	5745	19.45	12.89	30	Pass
157	5785	20.65	13.15	30	Pass
165	5825	19.86	12.98	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	12.74	11.05	24	Pass
46	5230	20.65	13.15	24	Pass
151	5755	20.65	13.15	30	Pass
159	5795	20.18	13.05	30	Pass

Mode C

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	24.95	13.97	24	Pass
40	5200	25.23	14.02	24	Pass
48	5240	25.23	14.02	24	Pass
149	5745	19.86	12.98	30	Pass
157	5785	20.94	13.21	30	Pass
165	5825	19.41	12.88	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	20.84	13.19	24	Pass
40	5200	20.89	13.20	24	Pass
48	5240	21.18	13.26	24	Pass
149	5745	19.45	12.89	30	Pass
157	5785	20.65	13.15	30	Pass
165	5825	19.86	12.98	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	20.94	13.21	24	Pass
46	5230	20.65	13.15	24	Pass
151	5755	20.65	13.15	30	Pass
159	5795	20.18	13.05	30	Pass

5 Pictures of Test Arrangements

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

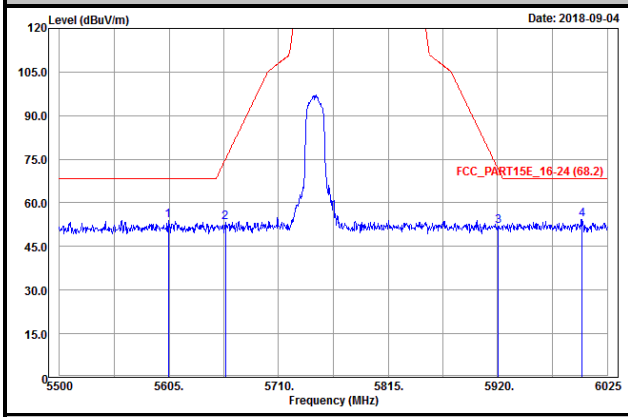
Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

Mode A

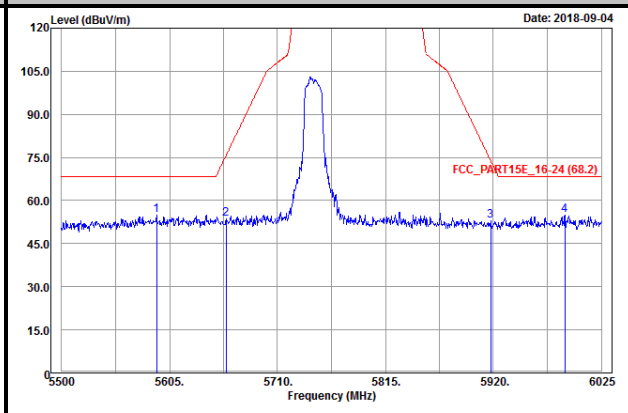
802.11a

Ch 149

Horizontal

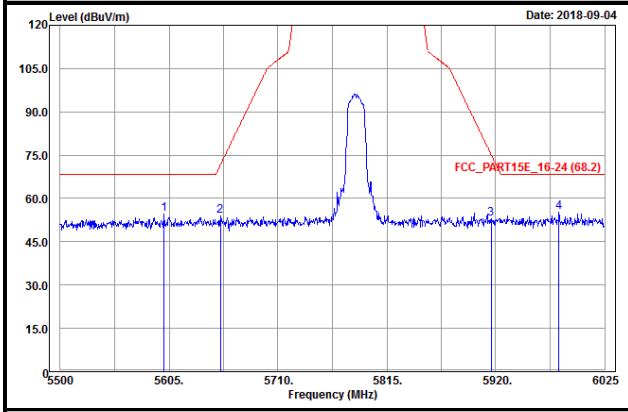


Vertical

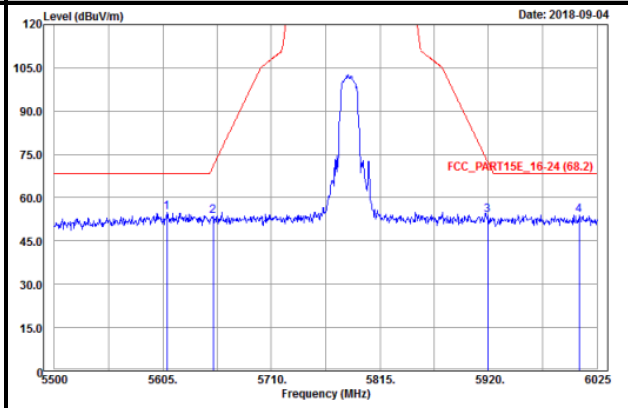


Ch 157

Horizontal

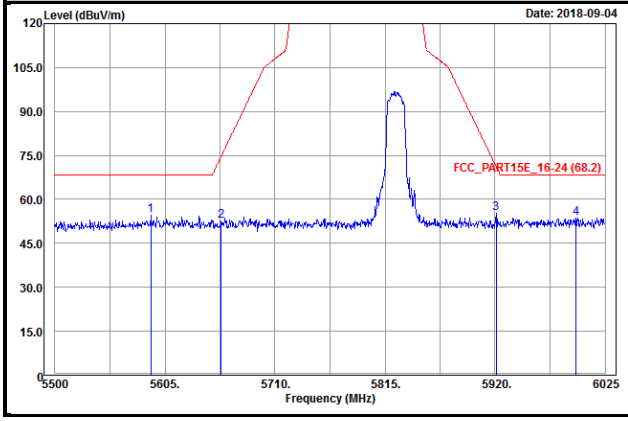


Vertical

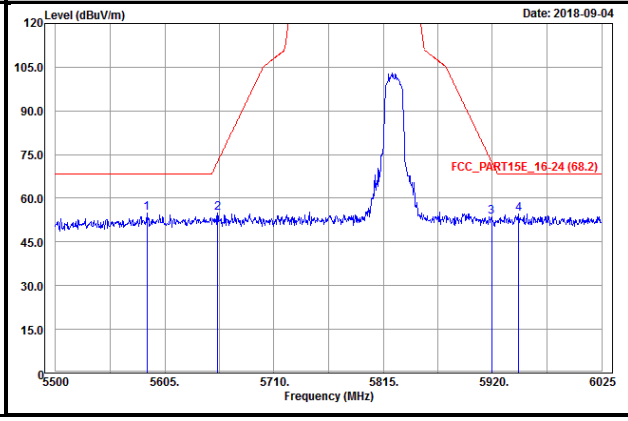


Ch 165

Horizontal



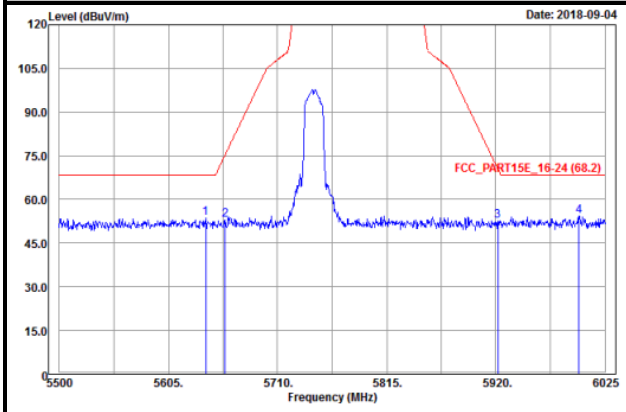
Vertical



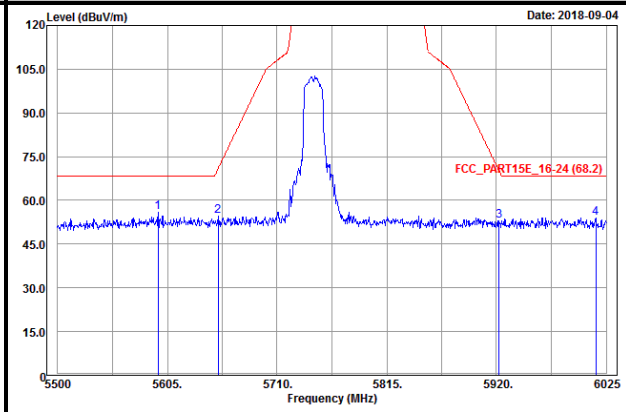
802.11n (HT20)

Ch 149

Horizontal

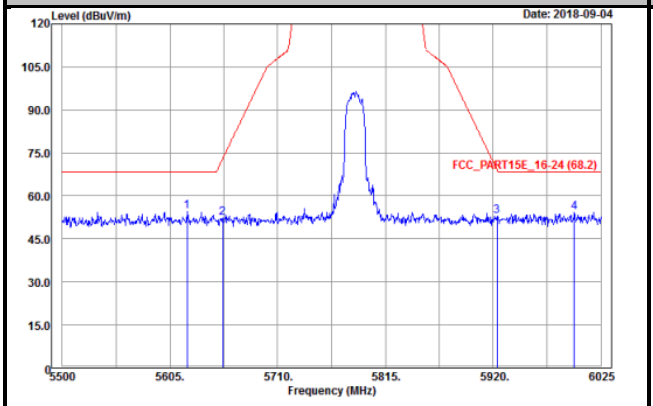


Vertical

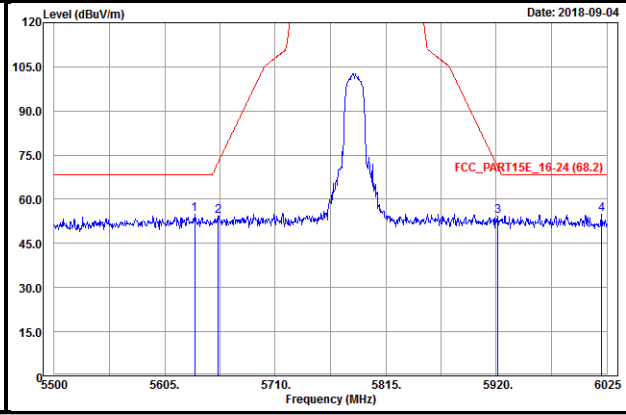


Ch 157

Horizontal

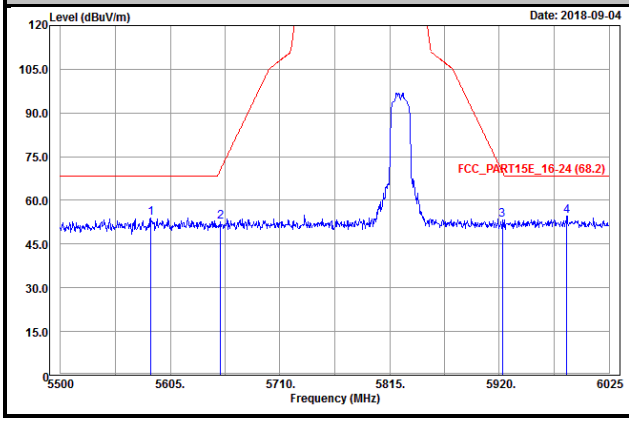


Vertical

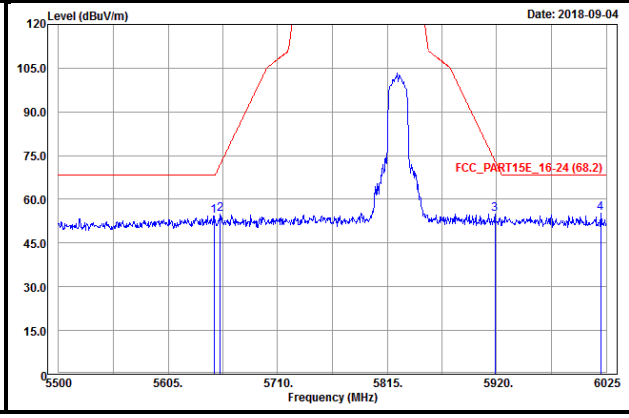


Ch 165

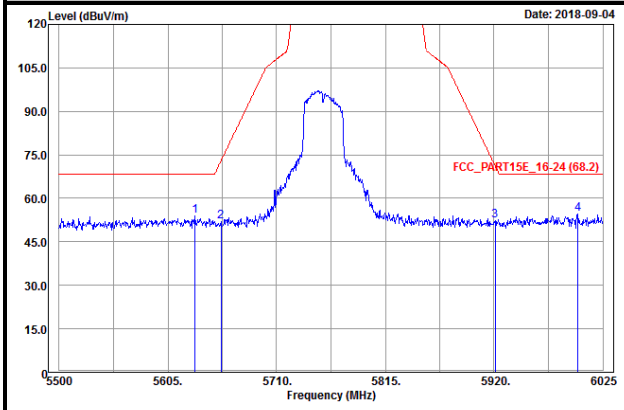
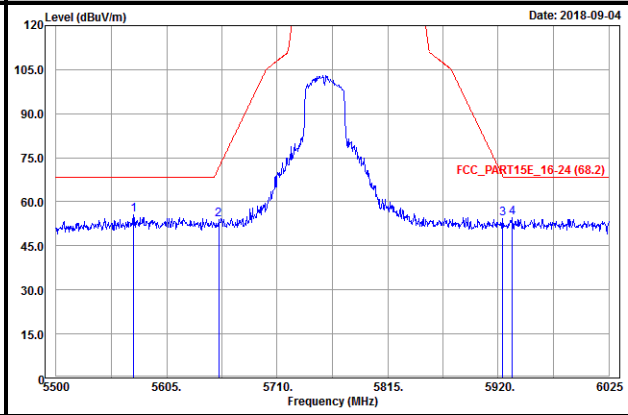
Horizontal

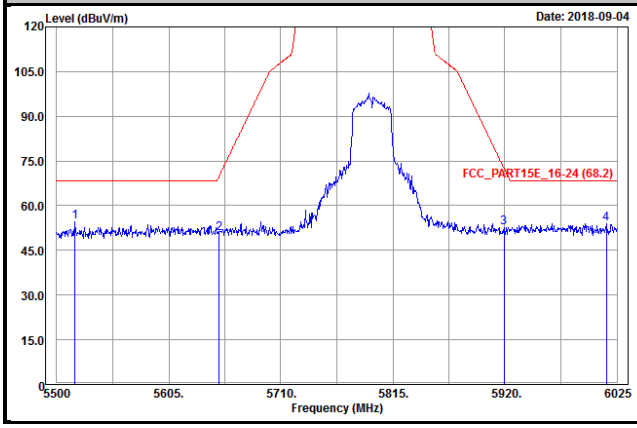
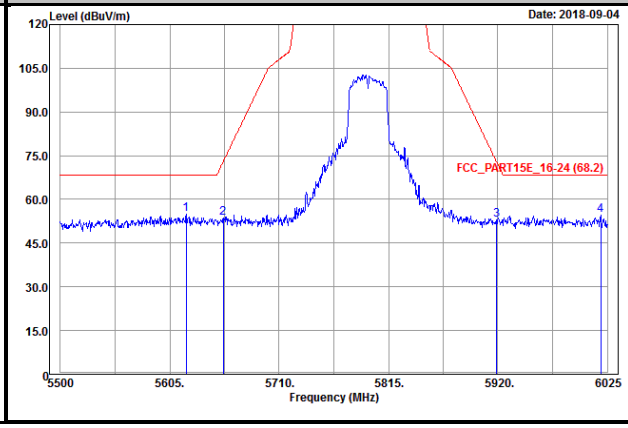


Vertical



802.11n (HT40)

Ch 151	
Horizontal	Vertical
	

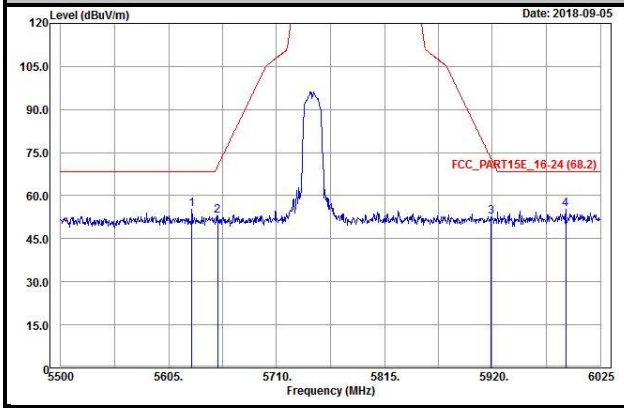
Ch 159	
Horizontal	Vertical
	

Mode B

802.11a

Ch 149

Horizontal



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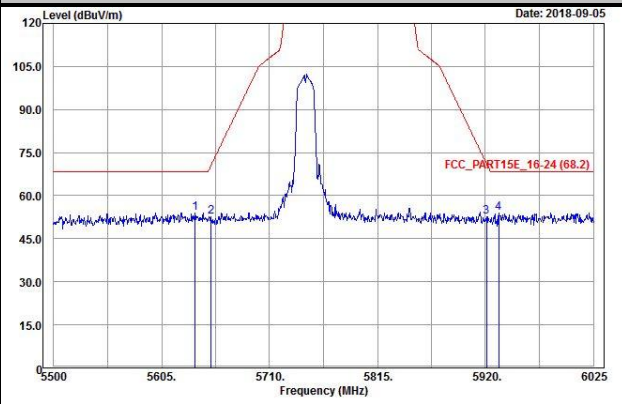
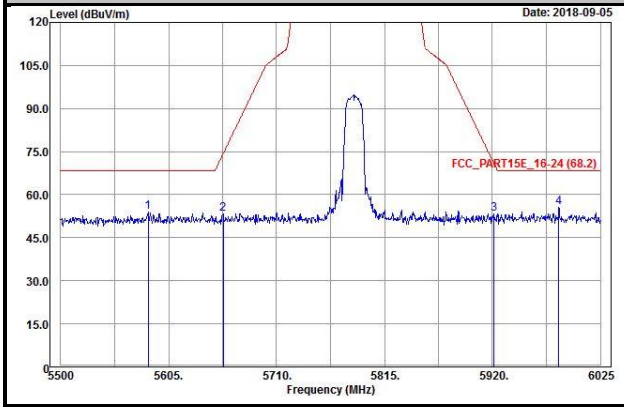


Ch 157

Horizontal



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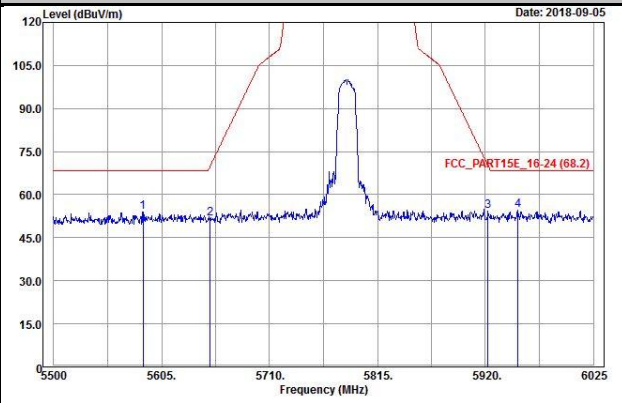
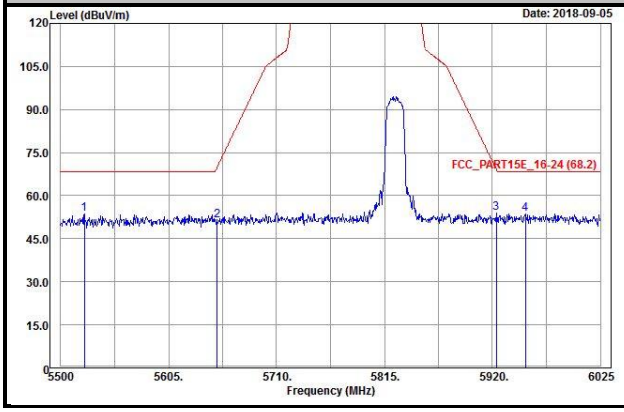


Ch 165

Horizontal



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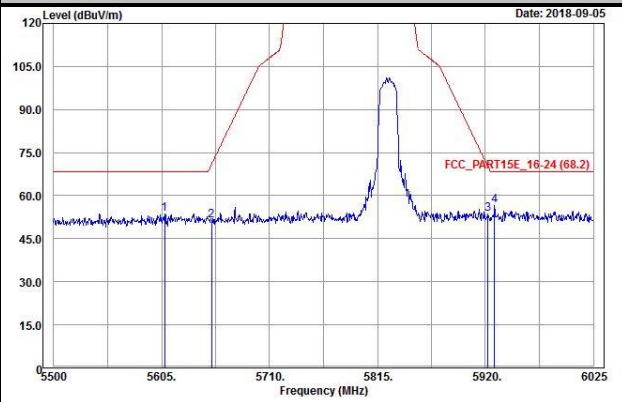
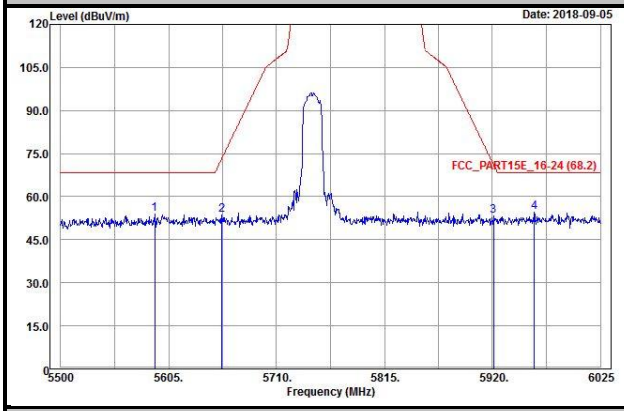
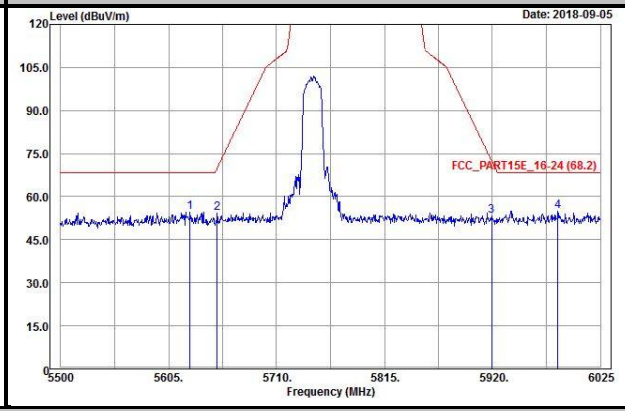
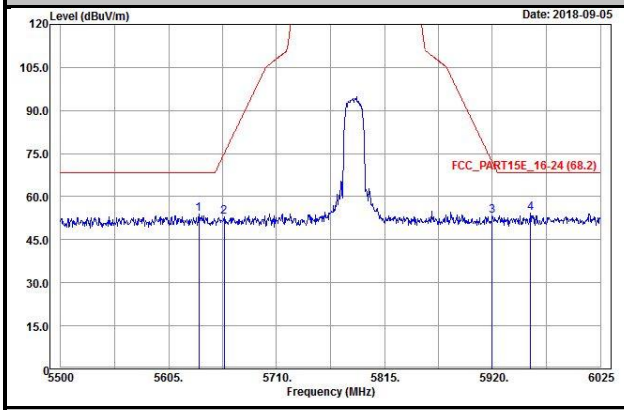
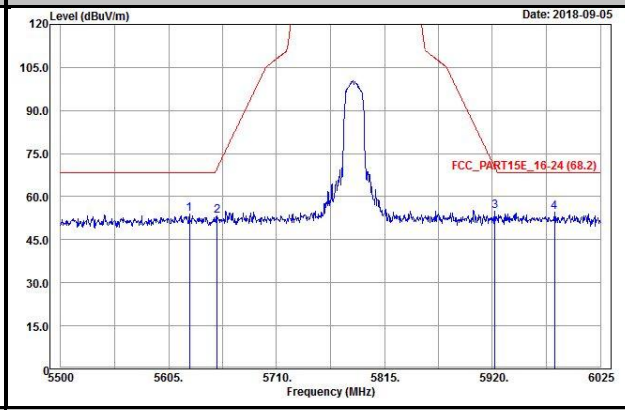
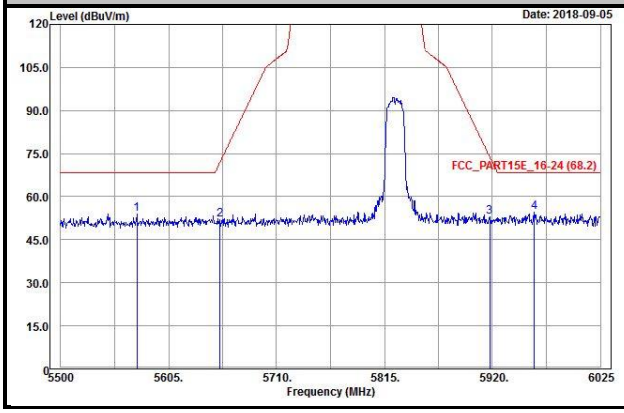
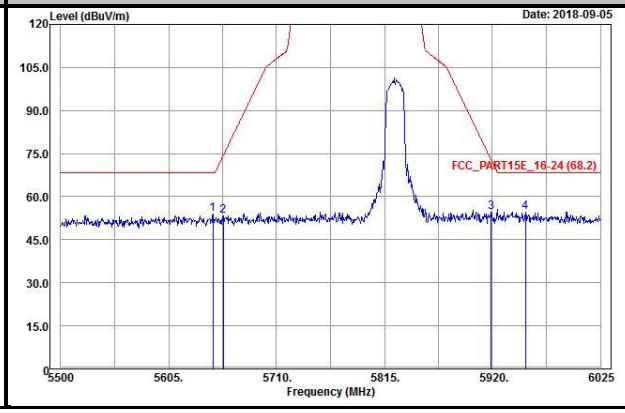
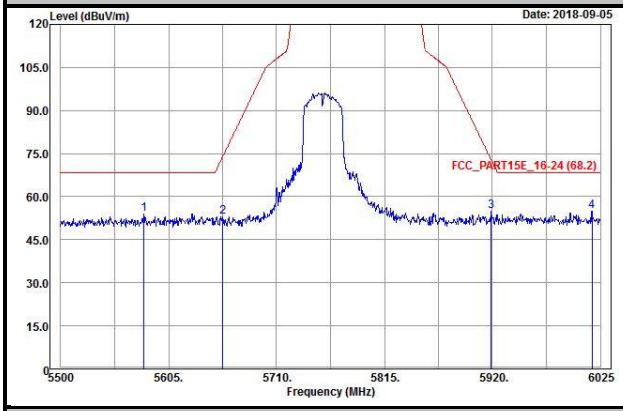
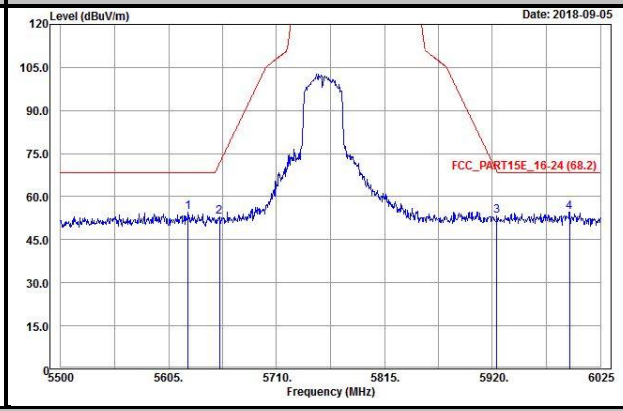
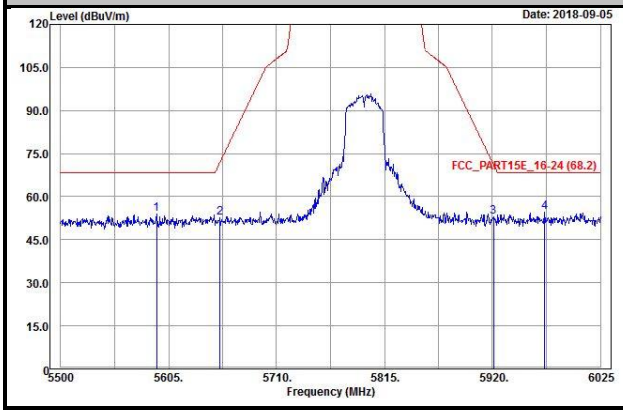
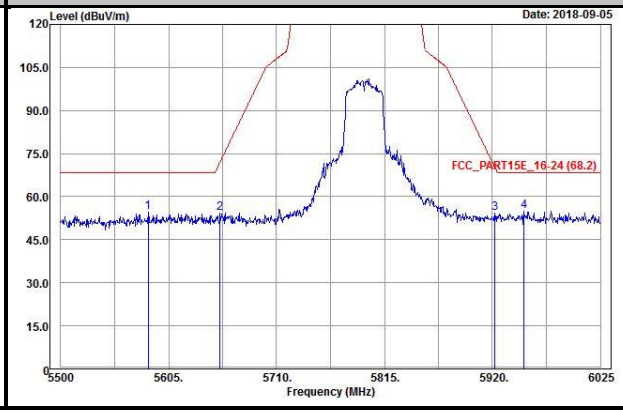


802.11n (HT20)

Ch 149	
Horizontal	Vertical
	
Ch 157	
Horizontal	Vertical
	
Ch 165	
Horizontal	Vertical
	

802.11n (HT40)

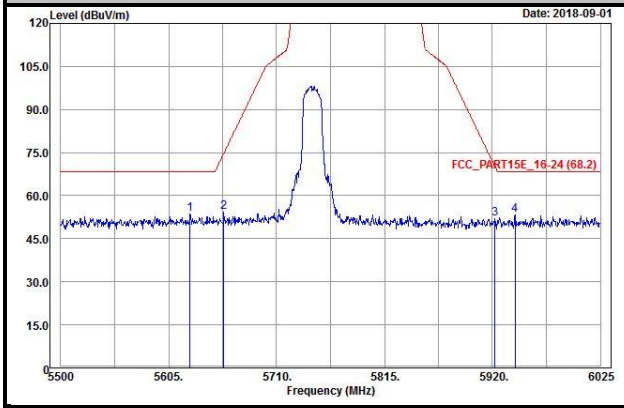
Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

Mode C

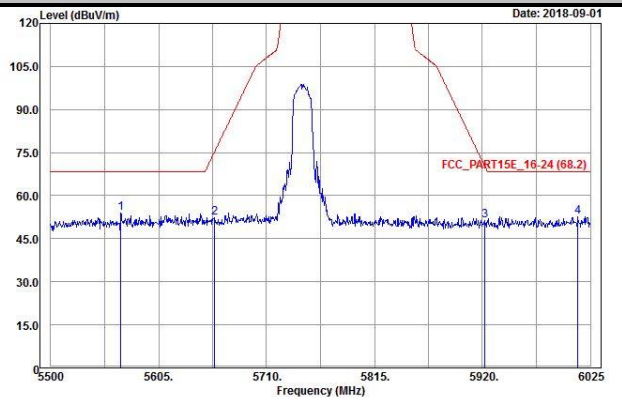
802.11a

Ch 149

Horizontal

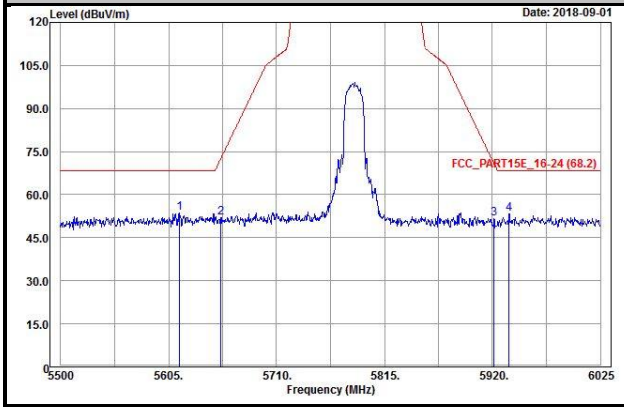


Vertical

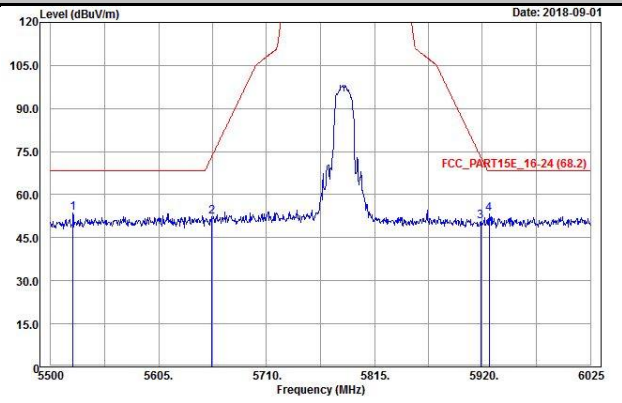


Ch 157

Horizontal

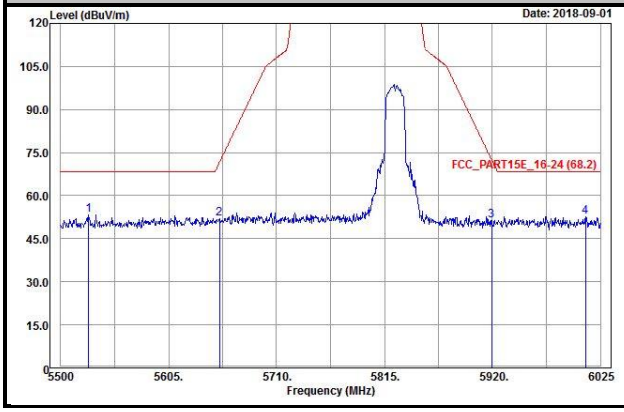


Vertical

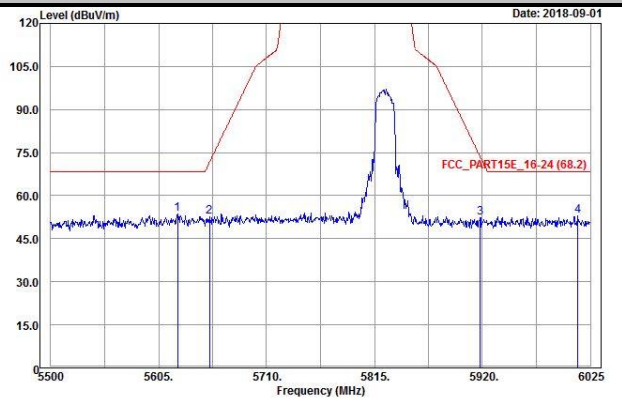


Ch 165

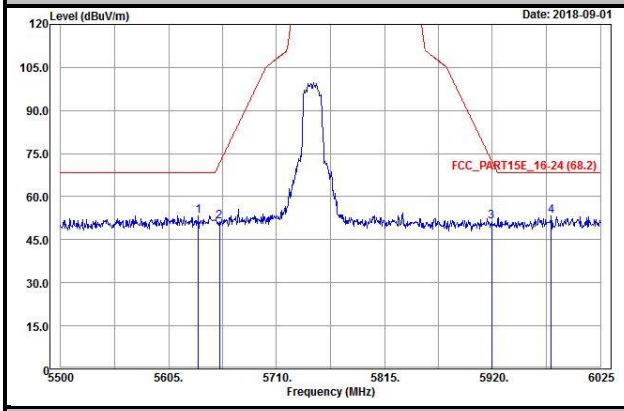
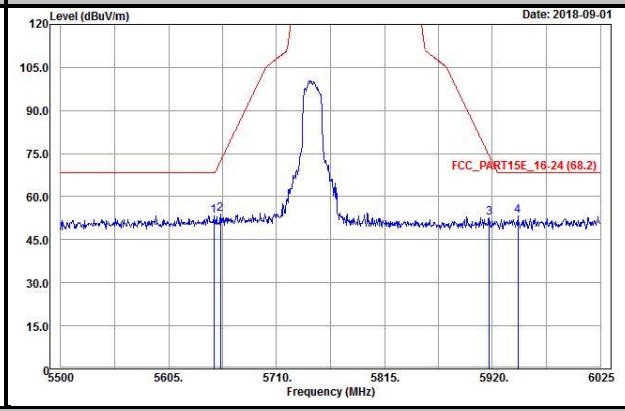
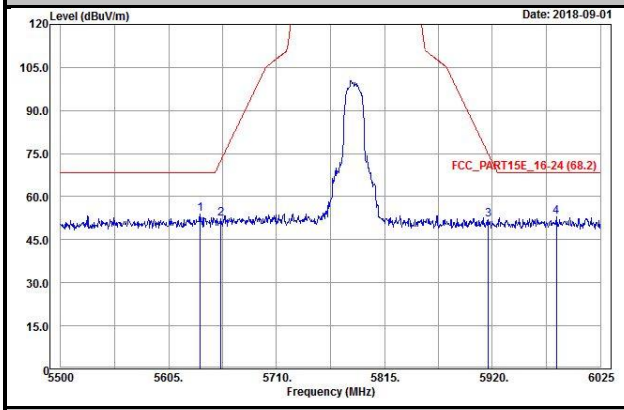
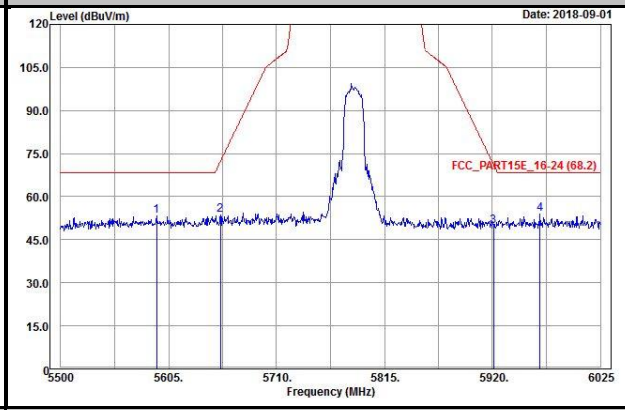
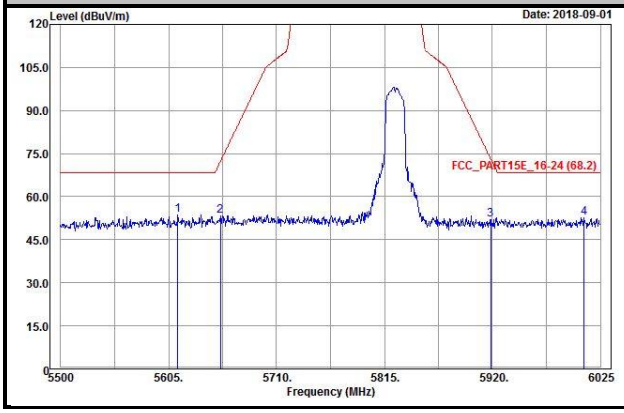
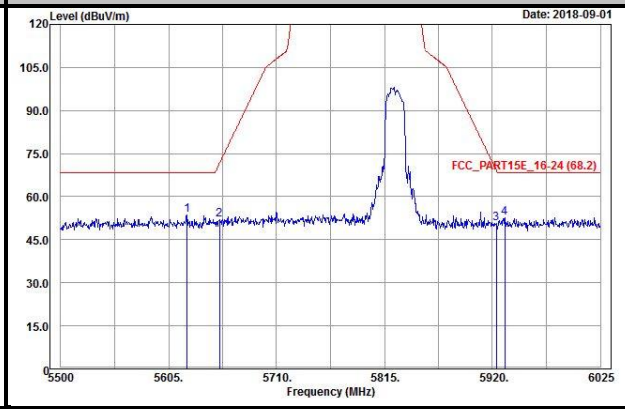
Horizontal



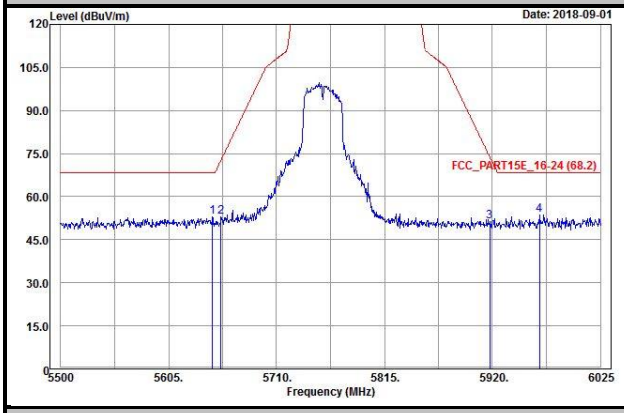
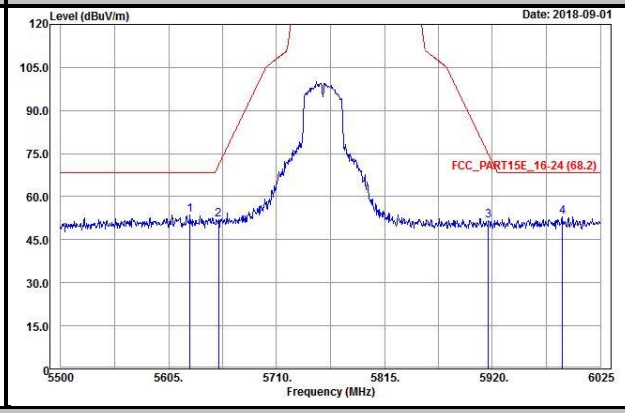
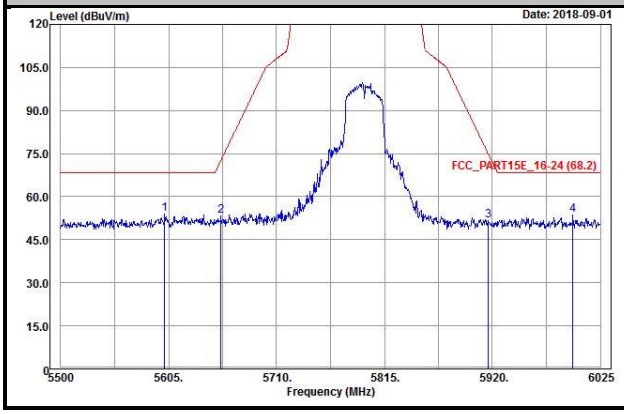
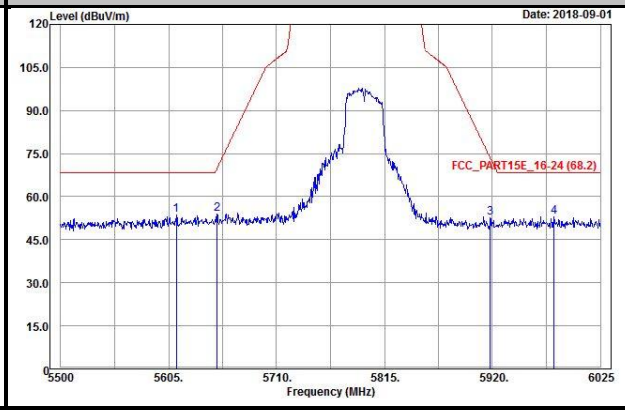
Vertical



802.11n (HT20)

Ch 149	
Horizontal	Vertical
	
Ch 157	
Horizontal	Vertical
	
Ch 165	
Horizontal	Vertical
	

802.11n (HT40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

Appendix – Information on the Testing Laboratories

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

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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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