Partial FCC Test Report

Report No.:	RF180817C04-3
FCC ID:	NKS-DUO-WIFI
Test Model:	Trimble Duo
Received Date:	Aug. 17, 2018
Test Date:	Aug. 30, 2018 ~ Sep. 06, 2018
Issued Date:	Sep. 11, 2018
Applicant:	PeopleNet Communications Corporation
Address:	4400 Baker Road, Minnetonka, MN 55343, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan, R.O.C.
FCC Registration / Designation Number:	788550 / TW0003

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF180817C04-3	Original Release	Sep. 11, 2018

1 Certificate of Conformity

Product:	Tablet
Brand:	Trimble
Test Model:	Trimble Duo
Sample Status:	Mass product
Applicant:	PeopleNet Communications Corporation
Test Date:	Aug. 30, 2018 ~ Sep. 06, 2018
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

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

Prepared by : Rona Chen , **Date:** Sep. 11, 2018

Rona Chen / Specialist

Approved by : , **Date:** Sep. 11, 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	Pass	Meet the requirement of limit. Minimum passing margin is -10.72 dB at 0.17328 MHz.
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 -1.87 dB at 5149.76 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	N/A	Refer to Note
---	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	Pass	Antenna connector is Ipex I. Not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.

Note:

This report is a partial report. Therefore, only test item of AC Power Conducted Emission and Radiated Emissions tests were performed for this report. Other testing data please refer to 7Layers report no.: MDE_UBLOX_1551_FCCf_Rev_1 for module (Brand: u-blox, Model: EMMY-W161)

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Tablet
Brand	Trimble
Test Model	Trimble Duo
Status of EUT	Mass product
Power Supply Rating	12.0 Vdc (DC Power Supply)
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)
Antenna Type	PIFA antenna with 4.02 dBi gain (5180 ~ 5240 MHz) PIFA antenna with 3.81 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	Ipex I
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

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

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

2. 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	
-	√	√	√	-

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

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

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)
-	5180-5240	802.11a	36 to 48	36, 44, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 44, 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)
-	5180-5240	802.11n (HT40)	38 to 46	38	OFDM	BPSK	13.5

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11n (HT40)	38 to 46	38	OFDM	BPSK	13.5

Test Condition:

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

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.

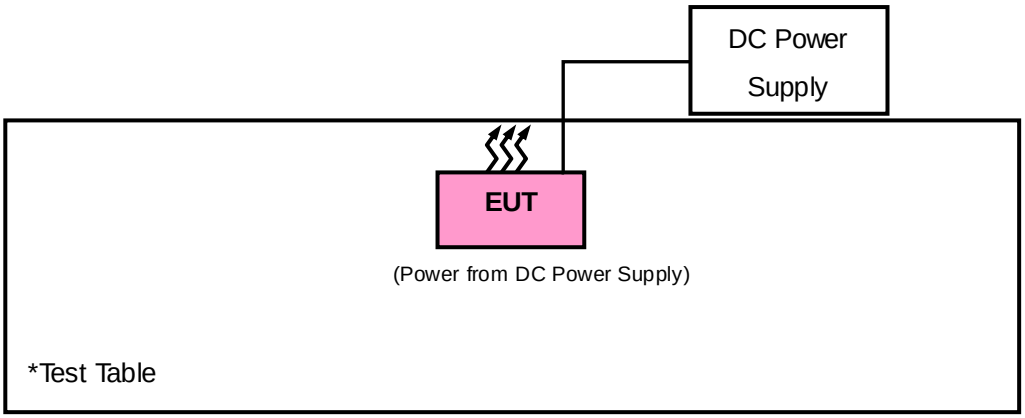
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	DC Power Supply	Topward	33010D	807748	N/A

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

Note:

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

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards

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

FCC Part 15, Subpart 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	N9038A	MY51210203	Mar. 16, 2018	Mar. 15, 2019
Spectrum Analyzer Agilent	N9010A	MY52220314	Nov. 24, 2017	Nov. 23, 2018
Broadband Horn Antenna SCHWARZBECK	BBHA 9170	148	Nov. 13, 2017	Nov. 12, 2018
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 12, 2017	Nov. 11, 2018
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Dec. 06, 2017	Dec. 05, 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 EMCI	EMC001340	980201	Jan. 23. 2018	Jan. 22, 2019
Preamplifier EMCI	EMC 012645	980115	Oct. 20, 2017	Oct. 19, 2018
Preamplifier EMCI	EMC 184045	980116	Oct. 20, 2017	Oct. 19, 2018
Preamplifier EMCI	EMC 330H	980112	Oct. 13, 2017	Oct. 12, 2018
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-8000&3000	140811+170717	Oct. 20, 2017	Oct. 19, 2018
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 20, 2017	Oct. 19, 2018
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 20, 2017	Oct. 19, 2018
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 10.
3. The horn antenna and preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The IC Site Registration No. is IC7450F-10.

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:

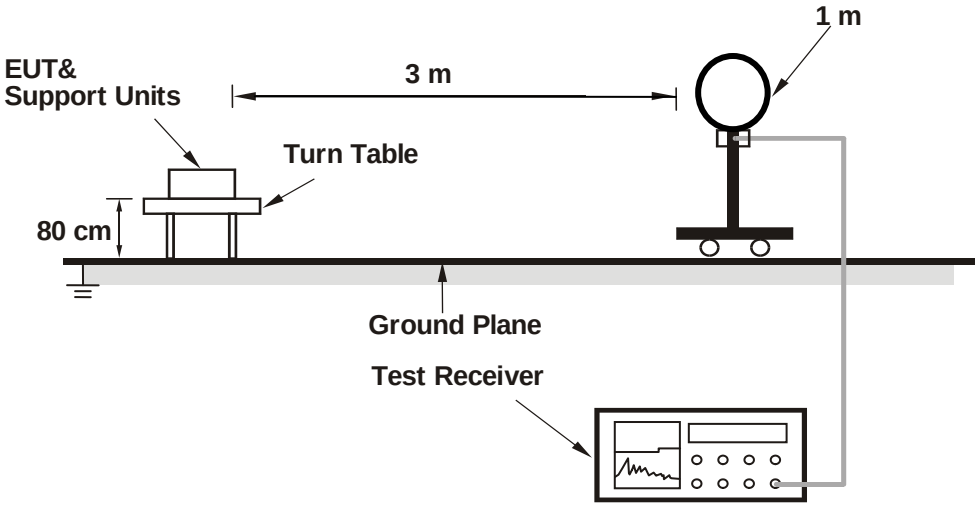
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
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 = 10 Hz ; 11n (HT20): RBW = 1 MHz, VBW = 10 Hz ; 11n (HT40): RBW = 1 MHz, VBW = 10 Hz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

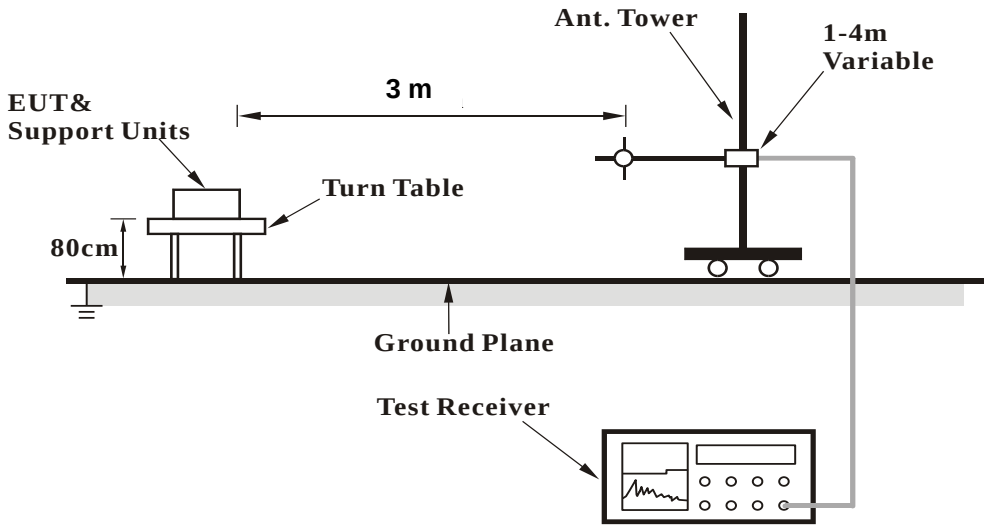
No deviation.

4.1.6 Test Setup

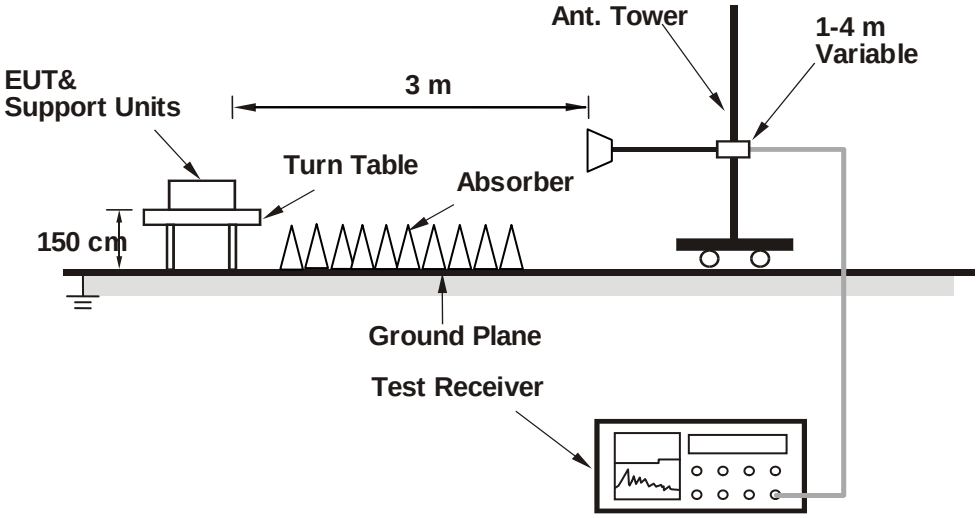
<Radiated Emission below 30 MHz>



<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：

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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	42.7	42.12	54	-11.3	31.56	6.34	37.32	218	23	Average
5150	56.63	56.05	74	-17.37	31.56	6.34	37.32	218	23	Peak
5180	94.76	94.14			31.59	6.37	37.34	218	23	Average
5180	104.87	104.25			31.59	6.37	37.34	218	23	Peak
*10360	54.46	57.22	68.2	-13.74	39.48	10.21	52.45	152	231	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	44.99	44.41	54	-9.01	31.56	6.34	37.32	183	246	Average
5150	59	58.42	74	-15	31.56	6.34	37.32	183	246	Peak
5180	96.73	96.11			31.59	6.37	37.34	183	246	Average
5180	106.55	105.93			31.59	6.37	37.34	183	246	Peak
*10360	55.27	58.03	68.2	-12.93	39.48	10.21	52.45	251	123	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 44	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5147.78	40.03	39.45	54	-13.97	31.56	6.34	37.32	202	360	Average
5147.78	52.15	51.57	74	-21.85	31.56	6.34	37.32	202	360	Peak
5220	97.65	97			31.61	6.4	37.36	202	360	Average
5220	107.52	106.87			31.61	6.4	37.36	202	360	Peak
5376.51	39.45	38.44	54	-14.55	31.72	6.47	37.18	202	360	Average
5376.51	52.28	51.27	74	-21.72	31.72	6.47	37.18	202	360	Peak
*10440	54.44	57.2	68.2	-13.76	39.55	10.21	52.52	265	231	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**
5147.6	41.37	40.79	54	-12.63	31.56	6.34	37.32	174	253	Average
5147.6	53.93	53.35	74	-20.07	31.56	6.34	37.32	174	253	Peak
5220	99.43	98.78			31.61	6.4	37.36	174	253	Average
5220	109.52	108.87			31.61	6.4	37.36	174	253	Peak
5376.95	40.71	39.7	54	-13.29	31.72	6.47	37.18	174	253	Average
5376.95	53.71	52.7	74	-20.29	31.72	6.47	37.18	174	253	Peak
*10440	54.98	57.74	68.2	-13.22	39.55	10.21	52.52	285	265	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5220 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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5093.24	38.38	37.85	54	-15.62	31.53	6.28	37.28	208	360	Average
5093.24	51.24	50.71	74	-22.76	31.53	6.28	37.28	208	360	Peak
5240	97.19	96.47			31.62	6.42	37.32	208	360	Average
5240	106.89	106.17			31.62	6.42	37.32	208	360	Peak
5396.75	39.33	38.3	54	-14.67	31.74	6.47	37.18	208	360	Average
5396.75	52.26	51.23	74	-21.74	31.74	6.47	37.18	208	360	Peak
*10480	54.21	57.05	68.2	-13.99	39.6	10.22	52.66	165	231	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**
5093.06	39.37	38.84	54	-14.63	31.53	6.28	37.28	177	249	Average
5093.06	52.02	51.49	74	-21.98	31.53	6.28	37.28	177	249	Peak
5240	99.67	98.95			31.62	6.42	37.32	177	249	Average
5240	109.28	108.56			31.62	6.42	37.32	177	249	Peak
5397.08	40.4	39.37	54	-13.6	31.74	6.47	37.18	177	249	Average
5397.08	52.54	51.51	74	-21.46	31.74	6.47	37.18	177	249	Peak
*10480	55.58	58.42	68.2	-12.62	39.6	10.22	52.66	165	285	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	93.7	92.18			32.21	6.78	37.47	189	26	Average
5745	103.48	101.96			32.21	6.78	37.47	189	26	Peak
11490	44.84	46.71	54	-9.16	40.25	10.66	52.78	163	337	Average
11490	55.06	56.93	74	-18.94	40.25	10.66	52.78	163	337	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	94.42	92.9			32.21	6.78	37.47	181	255	Average
5745	104.3	102.78			32.21	6.78	37.47	181	255	Peak
11490	44.23	46.1	54	-9.77	40.25	10.66	52.78	126	94	Average
11490	56.65	58.52	74	-17.35	40.25	10.66	52.78	126	94	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
5634.55	51.94	50.48	68.2	-16.26	32.04	6.7	37.28	189	26	Peak
5653.55	50.87	49.38	70.84	-19.97	32.06	6.71	37.28	189	26	Peak
5920.5	50.98	49.13	71.52	-20.54	32.49	6.86	37.5	189	26	Peak
5962.3	51.94	50.01	68.2	-16.26	32.57	6.87	37.51	189	26	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
5636.45	52.1	50.64	68.2	-16.1	32.04	6.7	37.28	181	255	Peak
5654.975	51.1	49.67	71.9	-20.8	32.06	6.71	37.34	181	255	Peak
5923.825	51.31	49.43	69.07	-17.76	32.52	6.86	37.5	181	255	Peak
5995.075	52.53	50.52	68.2	-15.67	32.63	6.89	37.51	181	255	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	94.47	92.93			32.26	6.82	37.54	194	26	Average
5785	104.33	102.79			32.26	6.82	37.54	194	26	Peak
11570	44.51	46.63	54	-9.49	40.13	10.76	53.01	120	244	Average
11570	56.1	58.22	74	-17.9	40.13	10.76	53.01	120	244	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	95.02	55.94			32.26	6.82	37.54	179	282	Average
5785	104.7	65.62			32.26	6.82	37.54	179	282	Peak
11570	44.35	46.47	54	-9.65	40.13	10.76	53.01	181	255	Average
11570	56.2	58.32	74	-17.8	40.13	10.76	53.01	181	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
5636.925	50.89	49.43	68.2	-17.31	32.04	6.7	37.28	194	26	Peak
5655.925	50.29	48.86	72.6	-22.31	32.06	6.71	37.34	194	26	Peak
5917.175	50.72	48.87	73.97	-23.25	32.49	6.86	37.5	194	26	Peak
5969.425	52.13	50.19	68.2	-16.07	32.57	6.88	37.51	194	26	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
5582.3	52.06	50.61	68.2	-16.14	31.95	6.66	37.16	179	282	Peak
5651.175	50.71	49.22	69.07	-18.36	32.06	6.71	37.28	179	282	Peak
5918.125	51.26	49.41	73.27	-22.01	32.49	6.86	37.5	179	282	Peak
5989.375	52.02	50.04	68.2	-16.18	32.6	6.89	37.51	179	282	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	93.13	91.47			32.35	6.84	37.53	194	29	Average
5825	103.11	101.45			32.35	6.84	37.53	194	29	Peak
11650	44.58	46.89	54	-9.42	40.03	10.8	53.14	178	142	Average
11650	55.26	57.57	74	-18.74	40.03	10.8	53.14	178	142	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	93.24	91.58			32.35	6.84	37.53	202	252	Average
5825	102.49	100.83			32.35	6.84	37.53	202	252	Peak
11650	44.02	46.33	54	-9.98	40.03	10.8	53.14	146	258	Average
11650	55.07	57.38	74	-18.93	40.03	10.8	53.14	146	258	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
5586.575	52.33	50.88	68.2	-15.87	31.95	6.66	37.16	194	29	Peak
5657.825	50.77	49.34	74.01	-23.24	32.06	6.71	37.34	194	29	Peak
5921.45	52.31	50.46	70.82	-18.51	32.49	6.86	37.5	194	29	Peak
5952.8	52.43	50.51	68.2	-15.77	32.55	6.87	37.5	194	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
5558.075	52.39	51	68.2	-15.81	31.89	6.62	37.12	202	252	Peak
5660.2	50.44	49.01	75.77	-25.33	32.06	6.71	37.34	202	252	Peak
5918.125	50.88	49.03	73.27	-22.39	32.49	6.86	37.5	202	252	Peak
6007.425	51.87	49.82	68.2	-16.33	32.67	6.89	37.51	202	252	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5147.96	44.21	43.63	54	-9.79	31.56	6.34	37.32	201	356	Average
5147.96	56.56	55.98	74	-17.44	31.56	6.34	37.32	201	356	Peak
5180	94.74	94.12			31.59	6.37	37.34	201	356	Average
5180	104.75	104.13			31.59	6.37	37.34	201	356	Peak
*10360	54.92	57.68	68.2	-13.28	39.48	10.21	52.45	185	265	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**
5147.96	44.91	44.33	54	-9.09	31.56	6.34	37.32	167	250	Average
5147.96	57.99	57.41	74	-16.01	31.56	6.34	37.32	167	250	Peak
5180	94.36	93.74			31.59	6.37	37.34	167	250	Average
5180	104.38	103.76			31.59	6.37	37.34	167	250	Peak
*10360	55.66	58.42	68.2	-12.54	39.48	10.21	52.45	195	265	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 44	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5140.94	41.22	40.63	54	-12.78	31.56	6.33	37.3	200	359	Average
5140.94	52.67	52.08	74	-21.33	31.56	6.33	37.3	200	359	Peak
5220	97.62	96.97			31.61	6.4	37.36	200	359	Average
5220	107.66	107.01			31.61	6.4	37.36	200	359	Peak
5390.59	40.86	39.84	54	-13.14	31.73	6.47	37.18	200	359	Average
5390.59	52.87	51.85	74	-21.13	31.73	6.47	37.18	200	359	Peak
*10440	54.54	57.3	68.2	-13.66	39.55	10.21	52.52	165	251	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**
5025.56	41.42	40.95	54	-12.58	31.48	6.23	37.24	155	264	Average
5025.56	52.94	52.47	74	-21.06	31.48	6.23	37.24	155	264	Peak
5220	96.92	96.27			31.61	6.4	37.36	155	264	Average
5220	106.95	106.3			31.61	6.4	37.36	155	264	Peak
5398.29	41.58	40.55	54	-12.42	31.74	6.47	37.18	155	264	Average
5398.29	53.74	52.71	74	-20.26	31.74	6.47	37.18	155	264	Peak
*10440	56.36	59.12	68.2	-11.84	39.55	10.21	52.52	232	265	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5220 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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5082.26	39.54	39.01	54	-14.46	31.52	6.28	37.27	195	358	Average
5082.26	52.56	52.03	74	-21.44	31.52	6.28	37.27	195	358	Peak
5240	96.94	96.22			31.62	6.42	37.32	195	358	Average
5240	106.99	106.27			31.62	6.42	37.32	195	358	Peak
5401.48	40.97	39.94	54	-13.03	31.74	6.47	37.18	195	358	Average
5401.48	53.12	52.09	74	-20.88	31.74	6.47	37.18	195	358	Peak
*10480	54.64	57.48	68.2	-13.56	39.6	10.22	52.66	152	231	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**
5097.74	39.86	39.32	54	-14.14	31.53	6.29	37.28	165	260	Average
5097.74	52.5	51.96	74	-21.5	31.53	6.29	37.28	165	260	Peak
5240	97.23	96.51			31.62	6.42	37.32	165	260	Average
5240	107.24	106.52			31.62	6.42	37.32	165	260	Peak
5421.83	41.08	40.02	54	-12.92	31.75	6.49	37.18	165	260	Average
5421.83	53.22	52.16	74	-20.78	31.75	6.49	37.18	165	260	Peak
*10480	56.49	59.33	68.2	-11.71	39.6	10.22	52.66	265	231	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	92.53	91.01			32.21	6.78	37.47	186	358	Average
5745	102.45	100.93			32.21	6.78	37.47	186	358	Peak
11490	44.51	46.38	54	-9.49	40.25	10.66	52.78	186	102	Average
11490	56.75	58.62	74	-17.25	40.25	10.66	52.78	186	102	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	93.27	91.75			32.21	6.78	37.47	181	255	Average
5745	102.8	101.28			32.21	6.78	37.47	181	255	Peak
11490	44.6	46.47	54	-9.4	40.25	10.66	52.78	156	281	Average
11490	56.84	58.71	74	-17.16	40.25	10.66	52.78	156	281	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
5613.65	52.02	50.57	68.2	-16.18	31.98	6.69	37.22	186	358	Peak
5655.925	50.9	49.47	72.6	-21.7	32.06	6.71	37.34	186	358	Peak
5923.825	52.43	50.55	69.07	-16.64	32.52	6.86	37.5	186	358	Peak
5929.05	51.88	50	68.2	-16.32	32.52	6.86	37.5	186	358	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
5588.95	51.8	50.35	68.2	-16.4	31.95	6.66	37.16	181	255	Peak
5656.875	51.81	50.38	73.31	-21.5	32.06	6.71	37.34	181	255	Peak
5916.7	51.36	49.51	74.32	-22.96	32.49	6.86	37.5	181	255	Peak
6015.025	52.87	50.8	68.2	-15.33	32.67	6.9	37.5	181	255	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	94.11	92.57			32.26	6.82	37.54	188	26	Average
5785	104.35	102.81			32.26	6.82	37.54	188	26	Peak
11570	44.48	46.6	54	-9.52	40.13	10.76	53.01	168	267	Average
11570	56.2	58.32	74	-17.8	40.13	10.76	53.01	168	267	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	94.66	93.12			32.26	6.82	37.54	179	257	Average
5785	104.92	103.38			32.26	6.82	37.54	179	257	Peak
11570	44.73	46.85	54	-9.27	40.13	10.76	53.01	140	209	Average
11570	55.97	58.09	74	-18.03	40.13	10.76	53.01	140	209	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
5580.875	51.6	50.19	68.2	-16.6	31.92	6.65	37.16	188	26	Peak
5652.125	50.07	48.58	69.78	-19.71	32.06	6.71	37.28	188	26	Peak
5923.35	51.45	49.57	69.42	-17.97	32.52	6.86	37.5	188	26	Peak
5949.95	52.48	50.56	68.2	-15.72	32.55	6.87	37.5	188	26	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
5601.3	51.43	49.93	68.2	-16.77	31.98	6.68	37.16	179	257	Peak
5651.65	51.64	50.15	69.43	-17.79	32.06	6.71	37.28	179	257	Peak
5918.6	51.07	49.22	72.92	-21.85	32.49	6.86	37.5	179	257	Peak
5976.075	52.69	50.72	68.2	-15.51	32.6	6.88	37.51	179	257	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	91.86	90.2			32.35	6.84	37.53	193	28	Average
5825	101.76	100.1			32.35	6.84	37.53	193	28	Peak
11650	44.15	46.46	54	-9.85	40.03	10.8	53.14	129	47	Average
11650	55.12	57.43	74	-18.88	40.03	10.8	53.14	129	47	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	91.71	90.05			32.35	6.84	37.53	193	250	Average
5825	101.38	99.72			32.35	6.84	37.53	193	250	Peak
11650	43.91	46.22	54	-10.09	40.03	10.8	53.14	154	307	Average
11650	55.75	58.06	74	-18.25	40.03	10.8	53.14	154	307	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
5636.925	51.48	50.02	68.2	-16.72	32.04	6.7	37.28	193	28	Peak
5657.35	50.46	49.03	73.66	-23.2	32.06	6.71	37.34	193	28	Peak
5916.7	51.57	49.72	74.32	-22.75	32.49	6.86	37.5	193	28	Peak
5993.65	52.39	50.38	68.2	-15.81	32.63	6.89	37.51	193	28	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
5563.775	51.36	49.96	68.2	-16.84	31.89	6.63	37.12	193	250	Peak
5658.3	51.24	49.81	74.36	-23.12	32.06	6.71	37.34	193	250	Peak
5919.55	52.42	50.57	72.22	-19.8	32.49	6.86	37.5	193	250	Peak
5962.3	52.56	50.63	68.2	-15.64	32.57	6.87	37.51	193	250	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5149.94	51.31	50.73	54	-2.69	31.56	6.34	37.32	203	356	Average
5149.94	70	69.42	74	-4	31.56	6.34	37.32	203	356	Peak
5190	92.39	91.76			31.59	6.38	37.34	203	356	Average
5190	102.39	101.76			31.59	6.38	37.34	203	356	Peak
5458.57	39.42	38.22	54	-14.58	31.77	6.51	37.08	203	356	Average
5458.57	51.77	50.57	74	-22.23	31.77	6.51	37.08	203	356	Peak
*10380	55.2	57.94	68.2	-13	39.5	10.21	52.45	165	231	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**
5149.76	**52.13**	**51.55**	**54**	**-1.87**	**31.56**	**6.34**	**37.32**	**173**	**246**	**Average**
5149.76	68.81	68.23	74	-5.19	31.56	6.34	37.32	173	246	Peak
5190	92.1	91.47			31.59	6.38	37.34	173	246	Average
5190	102.11	101.48			31.59	6.38	37.34	173	246	Peak
5355.61	39.76	38.77	54	-14.24	31.7	6.47	37.18	173	246	Average
5355.61	52.99	52	74	-21.01	31.7	6.47	37.18	173	246	Peak
*10380	55.26	58	68.2	-12.94	39.5	10.21	52.45	152	231	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

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**
5145.26	43.91	43.33	54	-10.09	31.56	6.34	37.32	190	354	Average
5145.26	63.51	62.93	74	-10.49	31.56	6.34	37.32	190	354	Peak
5230	94.8	94.09			31.62	6.41	37.32	190	354	Average
5230	104.81	104.1			31.62	6.41	37.32	190	354	Peak
5356.27	41.79	40.8	54	-12.21	31.7	6.47	37.18	190	354	Average
5356.27	57.48	56.49	74	-16.52	31.7	6.47	37.18	190	354	Peak
*10460	55.1	57.9	68.2	-13.1	39.57	10.22	52.59	222	231	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**
5137.52	44.97	44.39	54	-9.03	31.55	6.33	37.3	168	253	Average
5137.52	63.41	62.83	74	-10.59	31.55	6.33	37.3	168	253	Peak
5230	95.23	94.52			31.62	6.41	37.32	168	253	Average
5230	105.26	104.55			31.62	6.41	37.32	168	253	Peak
5350.33	43	42.01	54	-11	31.7	6.47	37.18	168	253	Average
5350.33	59.88	58.89	74	-14.12	31.7	6.47	37.18	168	253	Peak
*10460	54.47	57.27	68.2	-13.73	39.57	10.22	52.59	165	231	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	87.89	86.34			32.23	6.79	37.47	187	27	Average
5755	97.68	96.13			32.23	6.79	37.47	187	27	Peak
11510	44.93	46.82	54	-9.07	40.23	10.69	52.81	162	204	Average
11510	56.04	57.93	74	-17.96	40.23	10.69	52.81	162	204	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	88.35	86.8			32.23	6.79	37.47	182	256	Average
5755	98.06	96.51			32.23	6.79	37.47	182	256	Peak
11510	44.6	46.49	54	-9.4	40.23	10.69	52.81	138	174	Average
11510	56.42	58.31	74	-17.58	40.23	10.69	52.81	138	174	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
5616.975	51.17	49.69	68.2	-17.03	32.01	6.69	37.22	187	27	Peak
5659.25	51.66	50.23	75.07	-23.41	32.06	6.71	37.34	187	27	Peak
5920.975	50.85	49	71.17	-20.32	32.49	6.86	37.5	187	27	Peak
5930.95	52.48	50.6	68.2	-15.72	32.52	6.86	37.5	187	27	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
5577.075	51.62	50.17	68.2	-16.58	31.92	6.65	37.12	182	256	Peak
5656.4	50.72	49.29	72.95	-22.23	32.06	6.71	37.34	182	256	Peak
5922.875	52.42	50.54	69.77	-17.35	32.52	6.86	37.5	182	256	Peak
5955.175	52.37	50.45	68.2	-15.83	32.55	6.87	37.5	182	256	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	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

<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	90.59	89.01			32.29	6.83	37.54	188	28	Average
5795	100.85	99.27			32.29	6.83	37.54	188	28	Peak
11590	44.46	46.58	54	-9.54	40.11	10.78	53.01	151	126	Average
11590	56.47	58.59	74	-17.53	40.11	10.78	53.01	151	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
5795	91.58	90			32.29	6.83	37.54	170	282	Average
5795	101.5	99.92			32.29	6.83	37.54	170	282	Peak
11590	44.65	46.77	54	-9.35	40.11	10.78	53.01	118	201	Average
11590	54.69	56.81	74	-19.31	40.11	10.78	53.01	118	201	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
5641.2	51.6	50.14	68.2	-16.6	32.04	6.7	37.28	188	28	Peak
5651.175	50.63	49.14	69.07	-18.44	32.06	6.71	37.28	188	28	Peak
5920.5	51.37	49.52	71.52	-20.15	32.49	6.86	37.5	188	28	Peak
6016.45	51.38	49.31	68.2	-16.82	32.67	6.9	37.5	188	28	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
5637.875	51.21	49.75	68.2	-16.99	32.04	6.7	37.28	170	282	Peak
5651.65	50.74	49.25	69.43	-18.69	32.06	6.71	37.28	170	282	Peak
5921.45	51.26	49.41	70.82	-19.56	32.49	6.86	37.5	170	282	Peak
6000.3	52.13	50.12	68.2	-16.07	32.63	6.89	37.51	170	282	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:

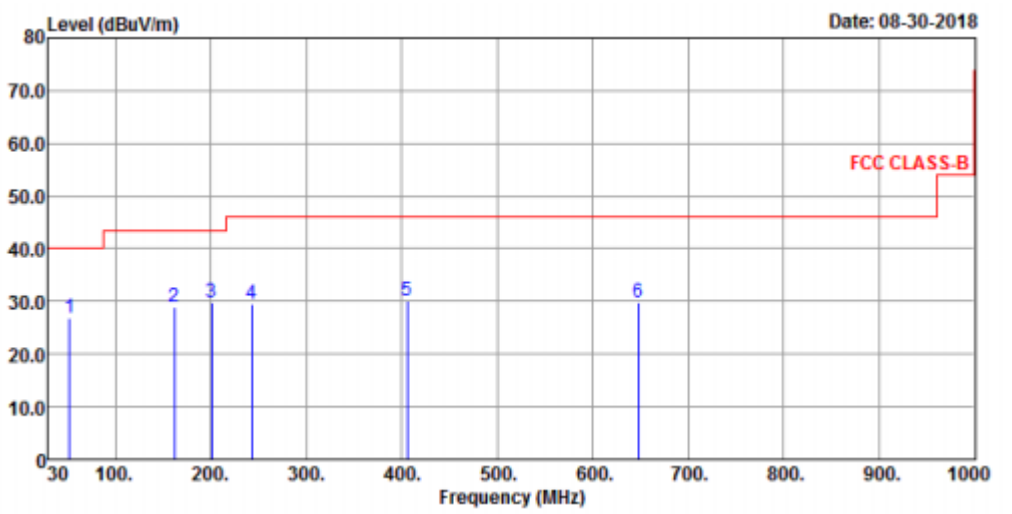
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

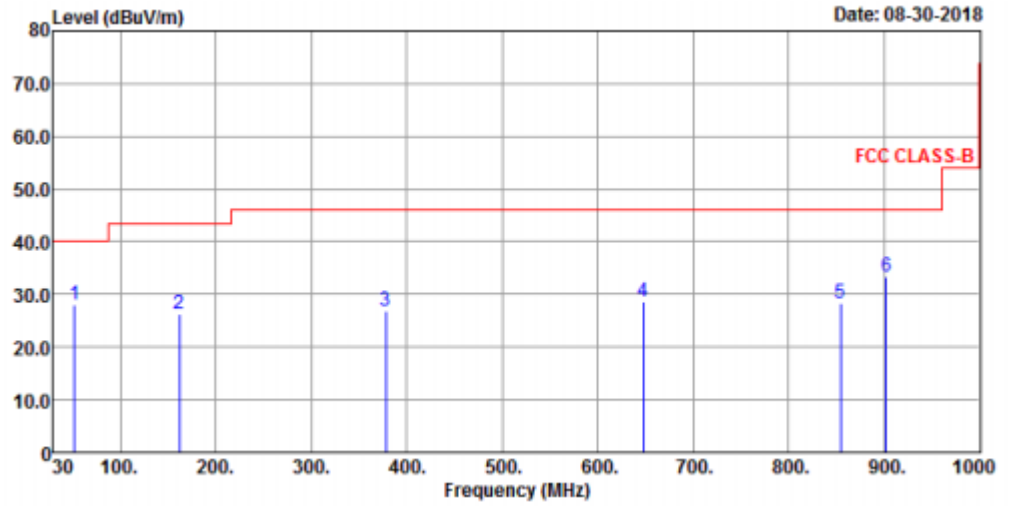
802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
52.31	27	45.02	40	-13	12.76	0.54	31.32	152	231	Peak
161.92	28.91	47.19	43.5	-14.59	12.54	1.03	31.85	165	295	Peak
200.72	29.76	50.88	43.5	-13.74	9.4	1.23	31.75	111	147	Peak
243.4	29.52	48.72	46	-16.48	11.19	1.45	31.84	285	231	Peak
405.39	30.22	44.71	46	-15.78	15.45	2.11	32.05	111	165	Peak
647.89	29.83	38.57	46	-16.17	20.19	3.1	32.03	152	231	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
52.31	28.1	46.12	40	-11.9	12.76	0.54	31.32	222	265	Peak
161.92	26.41	44.69	43.5	-17.09	12.54	1.03	31.85	147	152	Peak
378.23	26.93	42.05	46	-19.07	14.82	2	31.94	236	251	Peak
647.89	28.54	37.28	46	-17.46	20.19	3.1	32.03	211	295	Peak
854.5	28.44	33.53	46	-17.56	22.93	3.86	31.88	174	185	Peak
902.03	33.23	37.68	46	-12.77	23.52	4.05	32.02	102	231	Peak

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN/AMN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

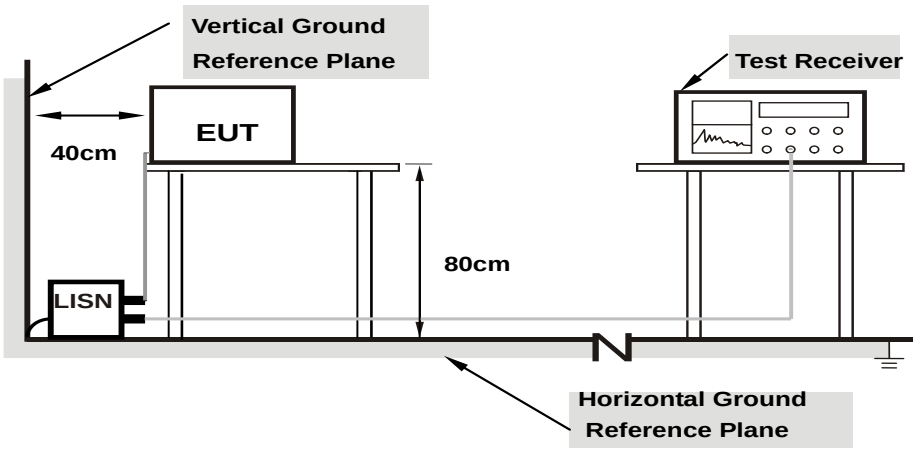
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

Note: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

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

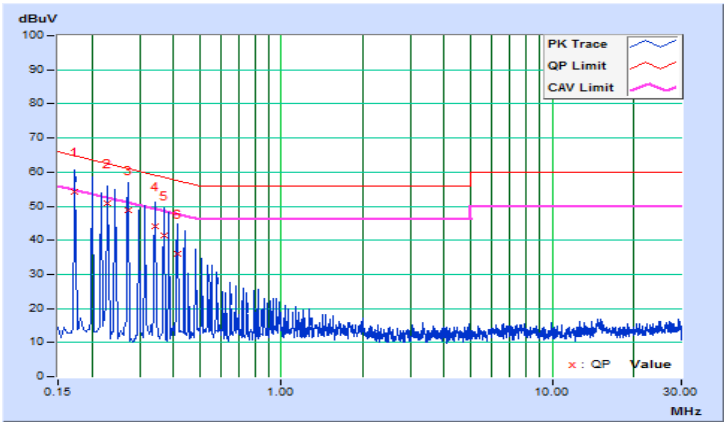
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2018/9/6

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.17328**	**9.67**	**44.41**	**10.60**	**54.08**	**20.27**	**64.80**	**54.80**	**-10.72**	**-34.53**
2	0.22820	9.67	41.10	10.00	50.77	19.67	62.51	52.51	-11.74	-32.84
3	0.27121	9.67	39.06	8.62	48.73	18.29	61.08	51.08	-12.35	-32.79
4	0.34159	9.66	34.54	5.60	44.20	15.26	59.16	49.16	-14.96	-33.90
5	0.36896	9.66	31.60	3.77	41.26	13.43	58.52	48.52	-17.26	-35.09
6	0.41197	9.66	26.30	1.29	35.96	10.95	57.61	47.61	-21.65	-36.66

Remarks:

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

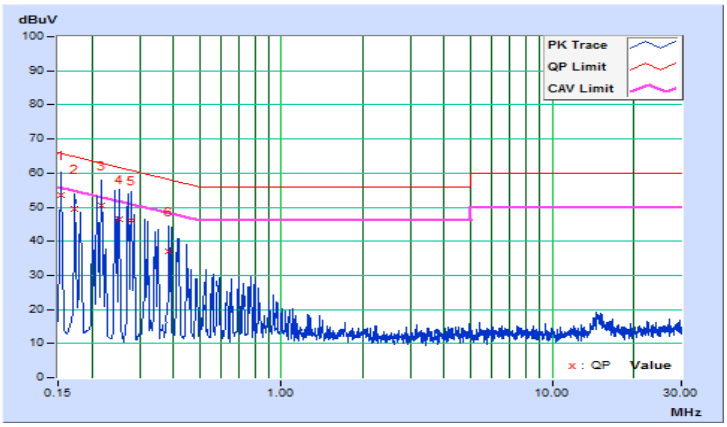


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Jisyong Wang	Test Date	2018/9/6

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.68	43.90	13.48	53.58	23.16	65.79	55.79	-12.21	-32.63
2	0.17346	9.68	39.95	10.22	49.63	19.90	64.79	54.79	-15.16	-34.89
3	0.21647	9.67	40.67	10.43	50.34	20.10	62.95	52.95	-12.61	-32.85
4	0.25166	9.67	36.86	7.24	46.53	16.91	61.70	51.70	-15.17	-34.79
5	0.27903	9.67	36.39	6.99	46.06	16.66	60.84	50.84	-14.78	-34.18
6	0.38460	9.67	27.24	1.37	36.91	11.04	58.18	48.18	-21.27	-37.14

Remarks:

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

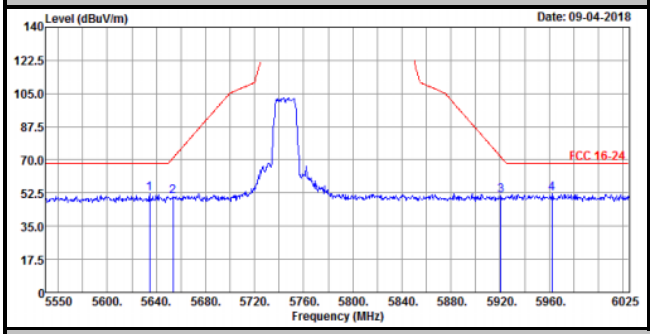
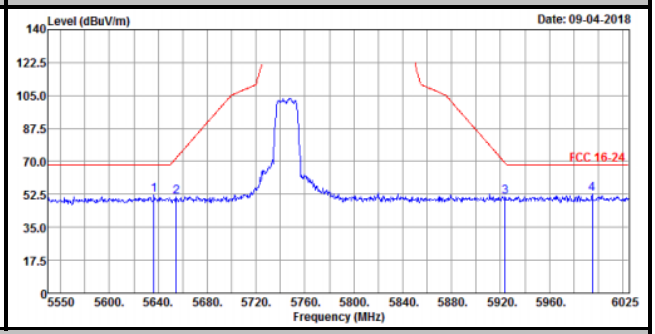
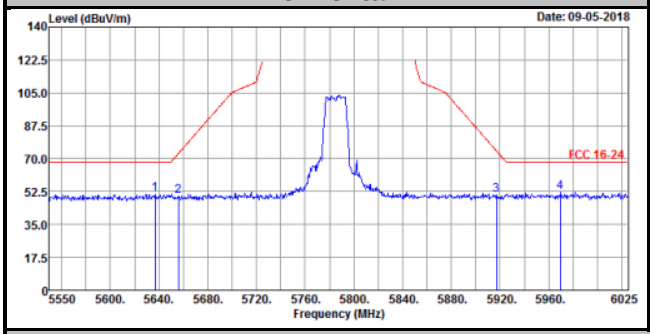
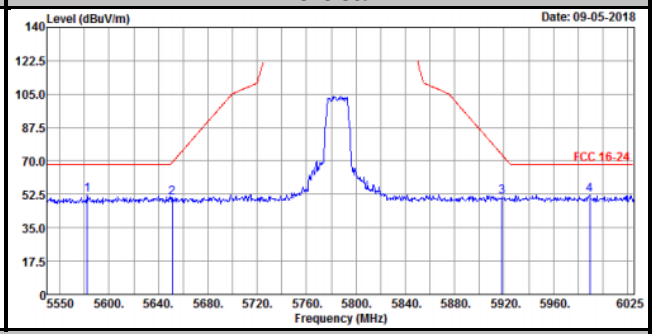
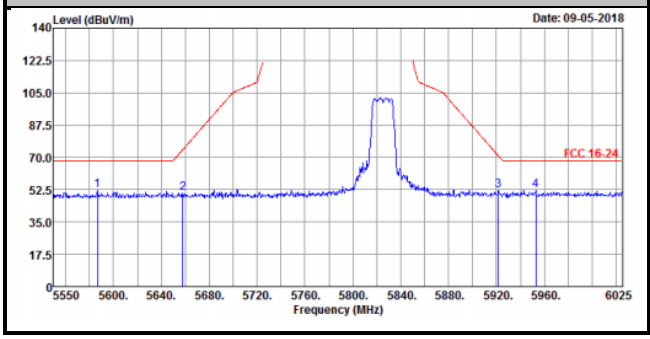
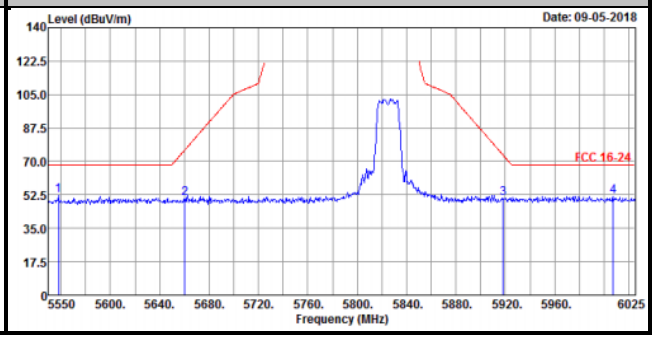


5 Pictures of Test Arrangements

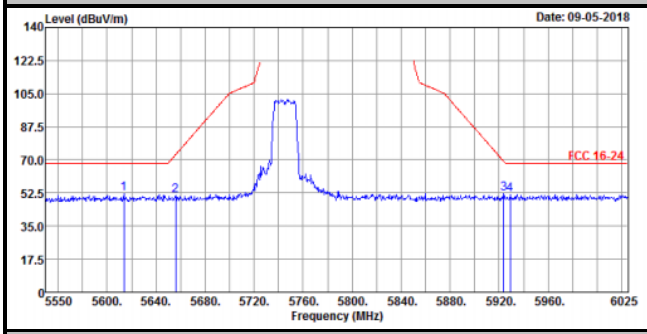
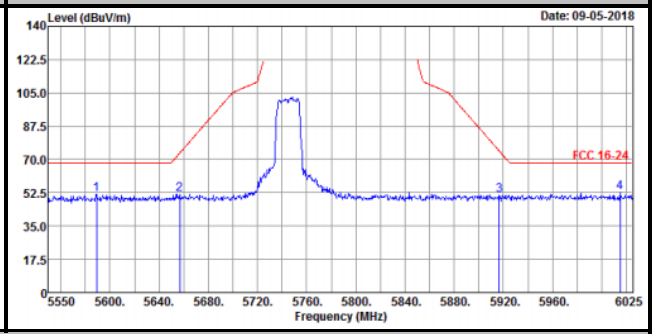
Please refer to the attached file (Test Setup Photo).

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

802.11a

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

802.11n (HT20)

Ch 149	
Horizontal	Vertical
	
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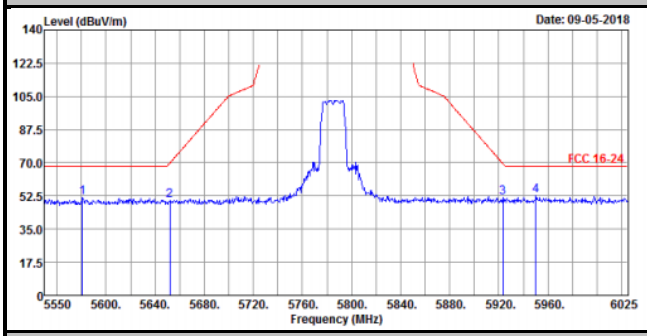	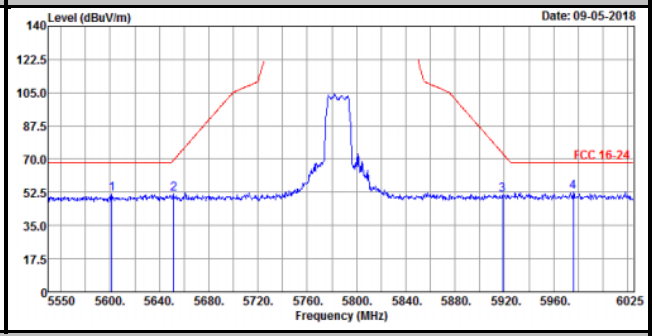
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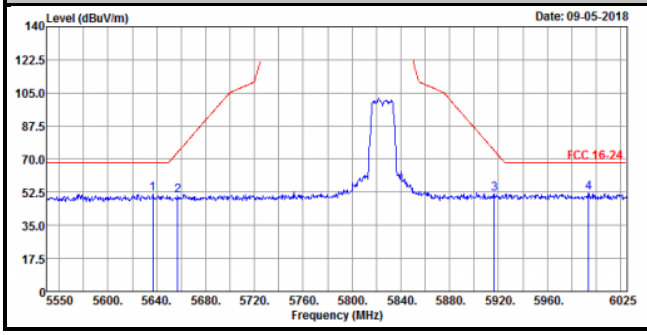
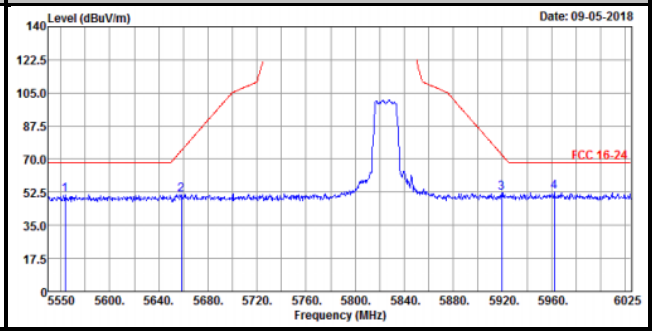
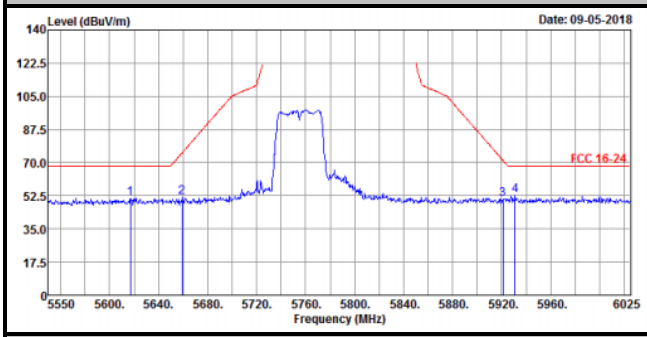
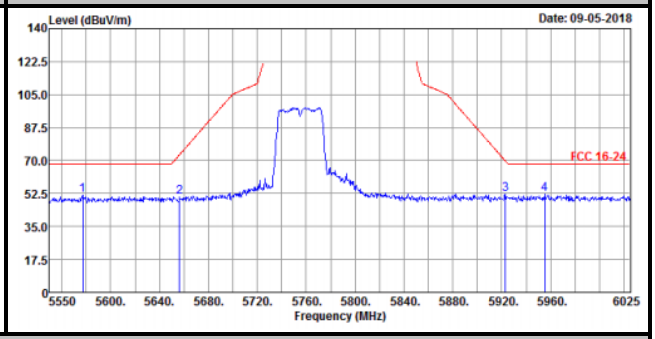
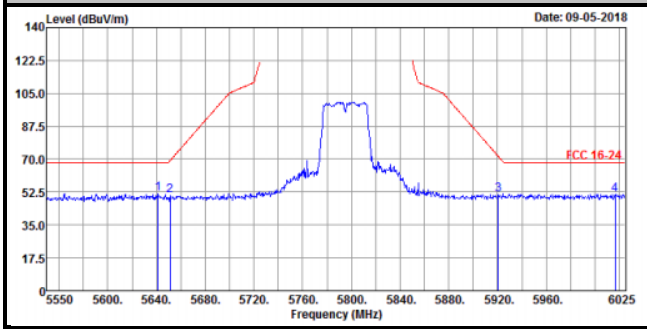
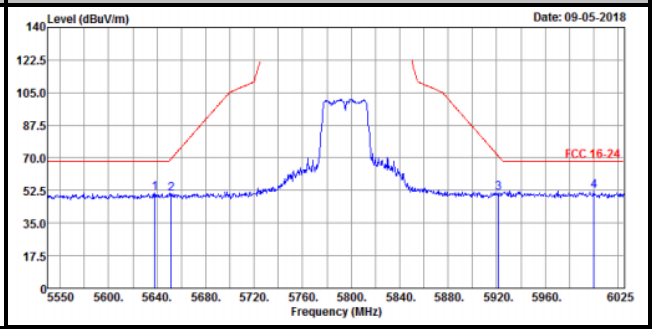
	

802.11n (HT40)

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.

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

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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