Partial FCC Test Report

Report No.: RF171204C20-3

FCC ID: NKS-PD5-WIFI

Test Model: PD5

Received Date: Dec. 04, 2017

Test Date: Dec. 16, 2017 ~ Dec. 19, 2017

Issued Date: Dec. 22, 2017

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 (1): No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

FCC Registration / Designation Number: 788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
RF171204C20-3	Original Release	Dec. 22, 2017

1 Certificate of Conformity

Product: Tablet

Brand: PeopleNet

Test Model: PD5

Sample Status: Production Unit

Applicant: PeopleNet Communications Corporation

Test Date: Dec. 16, 2017 ~ Dec. 19, 2017

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 EMC characteristics under the conditions specified in this report.

Prepared by : Vera Huang , **Date:** Dec. 22, 2017

Vera Huang / Specialist

Approved by : , **Date:** Dec. 22, 2017

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 -6.97 dB at 0.16173 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 -2.03 dB at 5146.85 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	No antenna connector is used.

*For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
Note: Test items for AC Power Conducted Emission and Radiated Emissions were performed for this report. For other test data, please refer to 7layers Test Report Reference: 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	PeopleNet
Test Model	PD5
Status of EUT	Production Unit
Power Supply Rating	3.6 Vdc (battery)
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 MCS7
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 3.3 dBi gain (5180 ~ 5240 MHz) PIFA antenna with 3.2 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

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

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

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Battery	SANYO	UR18650A(Y)-SECT-34	3.6 Vdc, 2150 mAh
BT/WLAN Module	u-blox	EMMY-W161	--

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

3.2 Description of Test Modes

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 **X-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

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

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

EUT Configure Mode	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	MCS0
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-	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	MCS0
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	MCS0

Radiated Emission Test (Below 1 GHz):

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

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

EUT Configure Mode	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	MCS0

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	MCS0

Test Condition:

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

3.3 Description of Support Units

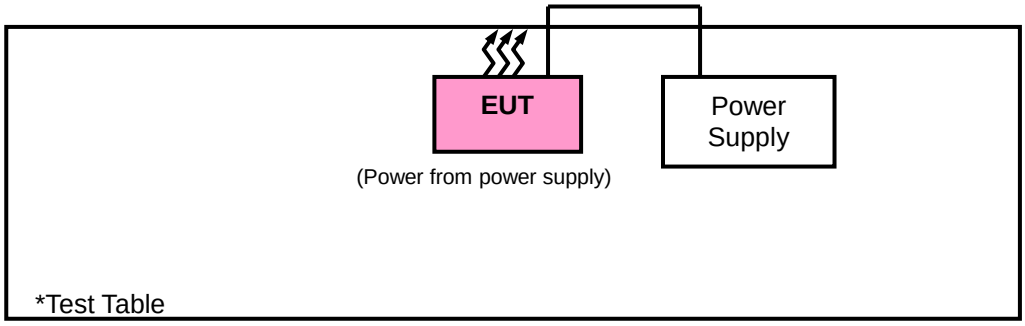
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

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)
789033 D02 General UNII Test Procedures New Rules v02r01
644545 D01 Guidance for IEEE 802 11ac v01r02
ANSI C63.10-2013

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

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

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

4.1.2 Limits of Unwanted Emission Out of the Restricted Bands

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v01r04		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	Feb. 17, 2017	Feb. 16, 2018
Spectrum Analyzer Agilent	N9010A	MY52220314	Nov. 24, 2017	Nov. 23, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	100115	Nov. 23, 2017	Nov. 22, 2018
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 06, 2017	Dec. 05, 2018
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Dec. 12, 2017	Dec. 11, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 01, 2017	Nov. 30, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 23, 2017	Jun. 22, 2018
Loop Antenna	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier EMCI	EMC001340	980201	Nov. 01, 2017	Oct. 30, 2018
Bluetooth Tester	CBT	100946	Jul. 29, 2016	Jul. 28, 2018
Preamplifier EMCI	EMC 012645	980115	Oct. 20, 2017	Oct. 19, 2018
Preamplifier EMCI	EMC 184045	980116	Oct. 21, 2016	Oct. 20, 2017
Preamplifier EMCI	EMC 330H	980112	Oct. 21, 2016	Oct. 20, 2017
Power Meter Anritsu	ML2495A	1012010	Aug. 15, 2017	Aug. 14, 2018
Power Sensor Anritsu	MA2411B	1315050	Aug. 15, 2017	Aug. 14, 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

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

Note:

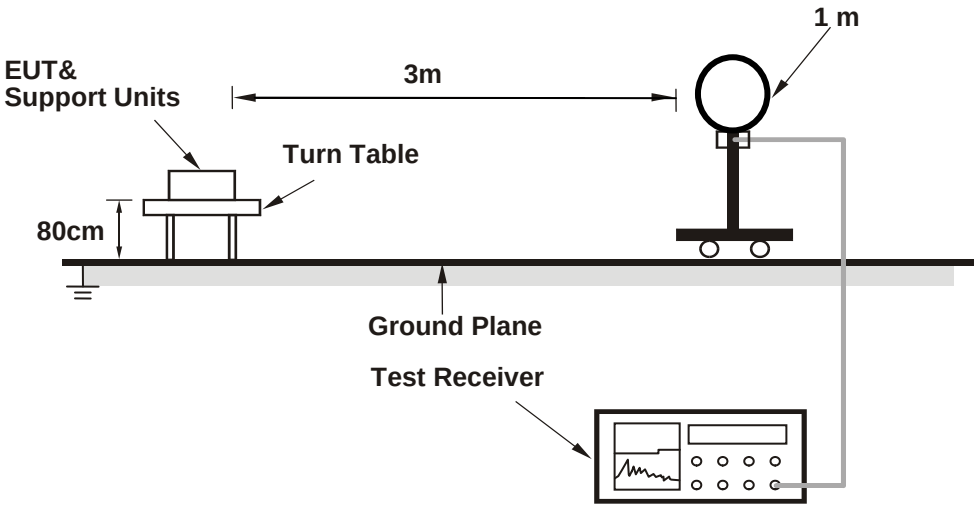
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1/T for Average (Duty cycle < 98 %) detection at frequency above 1 GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

No deviation.

4.1.6 Test Set Up

<Radiated emission below 30 MHz>



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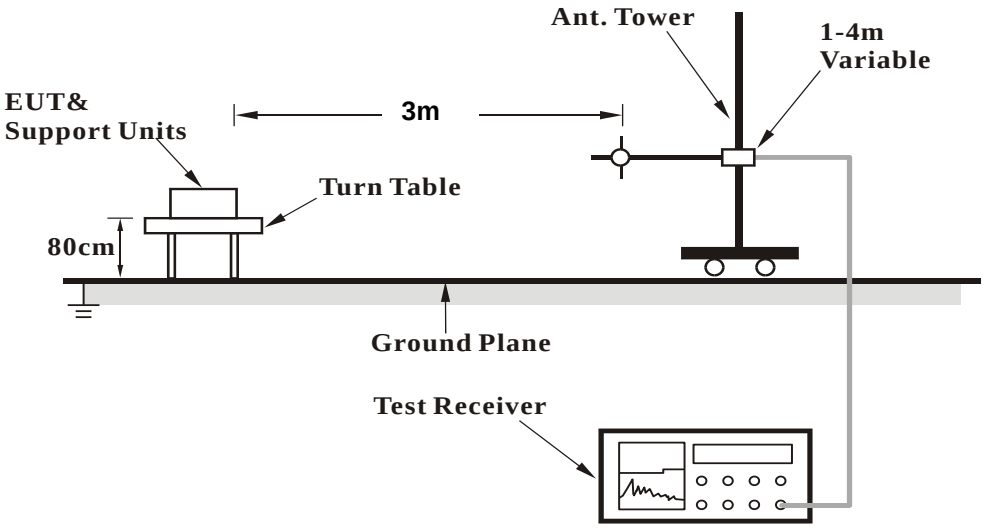

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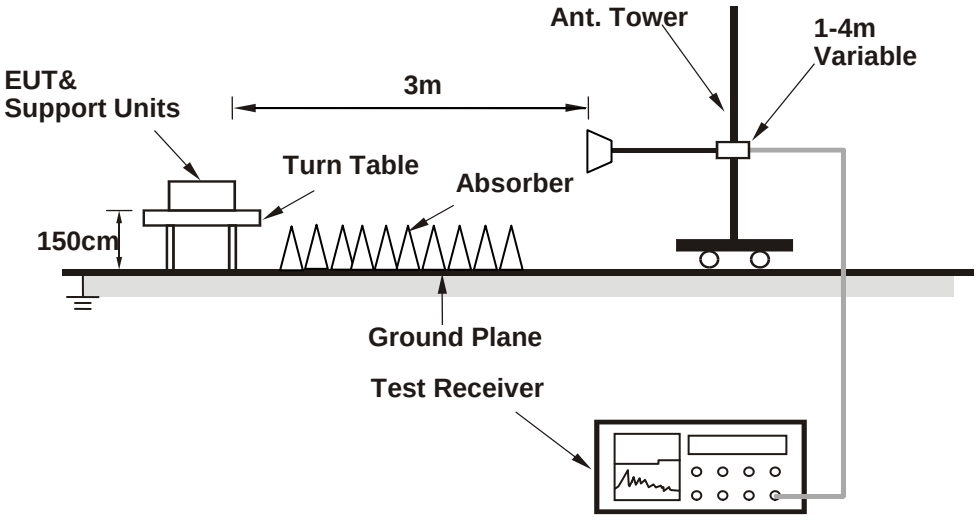


For the actual test configuration, please refer to the attached file (Test Setup Photo).

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**	Getaz Yang

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	45.06	44.48	54	-8.94	31.56	6.34	37.32	136	90	Average
5150	56.24	55.66	74	-17.76	31.56	6.34	37.32	136	90	Peak
5180	100.21	99.59			31.59	6.37	37.34	136	90	Average
5180	106.21	105.59			31.59	6.37	37.34	136	90	Peak
*10360	54.11	56.87	68.2	-14.09	39.48	10.21	52.45	111	254	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**
5147.15	46.06	45.48	54	-7.94	31.56	6.34	37.32	110	38	Average
5147.15	58	57.42	74	-16	31.56	6.34	37.32	110	38	Peak
5180	98.87	98.25			31.59	6.37	37.34	110	38	Average
5180	105.28	104.66			31.59	6.37	37.34	110	38	Peak
*10360	55.59	58.35	68.2	-12.61	39.48	10.21	52.45	201	254	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

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**	Getaz Yang

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**
5146.85	42.82	42.24	54	-11.18	31.56	6.34	37.32	101	34	Average
5146.85	53.19	52.61	74	-20.81	31.56	6.34	37.32	101	34	Peak
5220	103.65	103			31.61	6.4	37.36	101	34	Average
5220	109.53	108.88			31.61	6.4	37.36	101	34	Peak
5366.83	41.02	40.01	54	-12.98	31.72	6.47	37.18	101	34	Average
5366.83	54.3	53.29	74	-19.7	31.72	6.47	37.18	101	34	Peak
*10400	54.82	43.03	68.2	-13.38	39.51	10.2	37.92	125	236	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**
5148.65	42.61	42.03	54	-11.39	31.56	6.34	37.32	137	92	Average
5148.65	52.32	51.74	74	-21.68	31.56	6.34	37.32	137	92	Peak
5220	103.27	102.62			31.61	6.4	37.36	137	92	Average
5220	108.41	107.76			31.61	6.4	37.36	137	92	Peak
5378.16	41.62	40.6	54	-12.38	31.73	6.47	37.18	137	92	Average
5378.16	52.97	51.95	74	-21.03	31.73	6.47	37.18	137	92	Peak
*10400	54.91	57.65	68.2	-13.29	39.51	10.2	52.45	222	295	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

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**	Getaz Yang

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**
5147.15	40.7	40.12	54	-13.3	31.56	6.34	37.32	125	91	Average
5147.15	51.65	51.07	74	-22.35	31.56	6.34	37.32	125	91	Peak
5240	104.56	103.84			31.62	6.42	37.32	125	91	Average
5240	109.48	108.76			31.62	6.42	37.32	125	91	Peak
5388.72	41.56	40.54	54	-12.44	31.73	6.47	37.18	125	91	Average
5388.72	53.59	52.57	74	-20.41	31.73	6.47	37.18	125	91	Peak
*10480	54.26	57.1	68.2	-13.94	39.6	10.22	52.66	201	254	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**
5107.7	40.85	40.29	54	-13.15	31.54	6.3	37.28	102	34	Average
5107.7	51.54	50.98	74	-22.46	31.54	6.3	37.28	102	34	Peak
5240	104.56	103.84			31.62	6.42	37.32	102	34	Average
5240	109.1	108.38			31.62	6.42	37.32	102	34	Peak
5395.21	41.09	40.06	54	-12.91	31.74	6.47	37.18	102	34	Average
5395.21	53.87	52.84	74	-20.13	31.74	6.47	37.18	102	34	Peak
*10480	54.72	43.01	68.2	-13.48	39.6	10.22	38.11	201	145	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

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**	Getaz Yang

<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	99.24	97.72			32.21	6.78	37.47	131	261	Average
5745	107.75	106.23			32.21	6.78	37.47	131	261	Peak
11490	45.65	47.52	54	-8.35	40.25	10.66	52.78	201	251	Average
11490	55.32	57.19	74	-18.68	40.25	10.66	52.78	201	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**
5745	100.84	99.32			32.21	6.78	37.47	129	354	Average
5745	105.68	104.16			32.21	6.78	37.47	129	354	Peak
11490	46.09	47.96	54	-7.91	40.25	10.66	52.78	201	154	Average
11490	56.03	57.9	74	-17.97	40.25	10.66	52.78	201	154	Peak

<Ouf 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**
5619.35	52.61	51.13	68.2	-15.59	32.01	6.69	37.22	131	261	Peak
5656.875	51.27	49.84	73.31	-22.04	32.06	6.71	37.34	131	261	Peak
5917.175	51.98	50.13	73.97	-21.99	32.49	6.86	37.5	131	261	Peak
5974.65	51.96	49.99	68.2	-16.24	32.6	6.88	37.51	131	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**
5602.725	51.12	49.62	68.2	-17.08	31.98	6.68	37.16	129	354	Peak
5665.9	51.51	50.08	80	-28.49	32.06	6.71	37.34	129	354	Peak
5919.075	51.74	49.89	72.57	-20.83	32.49	6.86	37.5	129	354	Peak
5958.975	52.34	50.4	68.2	-15.86	32.57	6.87	37.5	129	354	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency

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**	Getaz Yang

<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	101.94	100.4			32.26	6.82	37.54	133	261	Average
5785	110.86	109.32			32.26	6.82	37.54	133	261	Peak
11570	46.4	48.52	54	-7.6	40.13	10.76	53.01	222	145	Average
11570	55.92	58.04	74	-18.08	40.13	10.76	53.01	222	145	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	99.67	98.13			32.26	6.82	37.54	161	357	Average
5785	108.39	106.85			32.26	6.82	37.54	161	357	Peak
11570	46.9	49.02	54	-7.1	40.13	10.76	53.01	125	147	Average
11570	56.46	58.58	74	-17.54	40.13	10.76	53.01	125	147	Peak

<Ouf 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**
5623.15	51.61	50.13	68.2	-16.59	32.01	6.69	37.22	133	261	Peak
5658.775	51.7	50.27	74.72	-23.02	32.06	6.71	37.34	133	261	Peak
5920.5	52.14	50.29	71.52	-19.38	32.49	6.86	37.5	133	261	Peak
5950.9	53.29	51.37	68.2	-14.91	32.55	6.87	37.5	133	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**
5637.4	51.3	49.84	68.2	-16.9	32.04	6.7	37.28	161	357	Peak
5663.525	50.31	48.88	78.24	-27.93	32.06	6.71	37.34	161	357	Peak
5915.275	52.25	50.4	75.37	-23.12	32.49	6.86	37.5	161	357	Peak
5936.65	52.22	50.34	68.2	-15.98	32.52	6.86	37.5	161	357	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency

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**	Getaz Yang

<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	99.65	97.99			32.35	6.84	37.53	127	259	Average
5825	108.99	107.33			32.35	6.84	37.53	127	259	Peak
11650	47.22	49.53	54	-6.78	40.03	10.8	53.14	111	155	Average
11650	56.81	59.12	74	-17.19	40.03	10.8	53.14	111	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**
5825	99.93	98.27			32.35	6.84	37.53	134	356	Average
5825	107.84	106.18			32.35	6.84	37.53	134	356	Peak
11650	45.22	47.53	54	-8.78	40.03	10.8	53.14	102	84	Average
11650	55.44	57.75	74	-18.56	40.03	10.8	53.14	102	84	Peak

<Ouf 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**
5639.775	51.25	49.79	68.2	-16.95	32.04	6.7	37.28	127	259	Peak
5663.525	50.97	49.54	78.24	-27.27	32.06	6.71	37.34	127	259	Peak
5918.6	52.22	50.37	72.92	-20.7	32.49	6.86	37.5	127	259	Peak
5947.1	52.23	50.31	68.2	-15.97	32.55	6.87	37.5	127	259	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**
5631.7	51.38	49.95	68.2	-16.82	32.01	6.7	37.28	134	356	Peak
5655.925	50.69	49.26	72.6	-21.91	32.06	6.71	37.34	134	356	Peak
5918.125	51.09	49.24	73.27	-22.18	32.49	6.86	37.5	134	356	Peak
5941.4	51.87	49.95	68.2	-16.33	32.55	6.87	37.5	134	356	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency

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**	Getaz Yang

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**
5148.8	46.35	45.77	54	-7.65	31.56	6.34	37.32	159	88	Average
5148.8	57.12	56.54	74	-16.88	31.56	6.34	37.32	159	88	Peak
5180	98.21	97.59			31.59	6.37	37.34	159	88	Average
5180	105.93	105.31			31.59	6.37	37.34	159	88	Peak
*10360	53.5	56.26	68.2	-14.7	39.48	10.21	52.45	142	214	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	45.99	45.41	54	-8.01	31.56	6.34	37.32	102	37	Average
5149.55	59.5	58.92	74	-14.5	31.56	6.34	37.32	102	37	Peak
5180	99.48	98.86			31.59	6.37	37.34	102	37	Average
5180	104.97	104.35			31.59	6.37	37.34	102	37	Peak
*10360	54.82	57.58	68.2	-13.38	39.48	10.21	52.45	222	254	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

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**	Getaz Yang

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**
5146.85	43.33	42.75	54	-10.67	31.56	6.34	37.32	151	89	Average
5146.85	53.99	53.41	74	-20.01	31.56	6.34	37.32	151	89	Peak
5220	103.87	103.22			31.61	6.4	37.36	151	89	Average
5220	109.16	108.51			31.61	6.4	37.36	151	89	Peak
5376.07	41.47	40.46	54	-12.53	31.72	6.47	37.18	151	89	Average
5376.07	52.37	51.36	74	-21.63	31.72	6.47	37.18	151	89	Peak
*10400	54.83	57.57	68.2	-13.37	39.51	10.2	52.45	301	147	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**
5137.55	42.27	41.69	54	-11.73	31.55	6.33	37.3	101	40	Average
5137.55	52.71	52.13	74	-21.29	31.55	6.33	37.3	101	40	Peak
5220	102.54	101.89			31.61	6.4	37.36	101	40	Average
5220	108.17	107.52			31.61	6.4	37.36	101	40	Peak
5368.7	40.74	39.73	54	-13.26	31.72	6.47	37.18	101	40	Average
5368.7	52.73	51.72	74	-21.27	31.72	6.47	37.18	101	40	Peak
*10400	54.54	57.28	68.2	-13.66	39.51	10.2	52.45	232	214	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

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**	Getaz Yang

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**
5148.65	40.67	40.09	54	-13.33	31.56	6.34	37.32	152	87	Average
5148.65	53.05	52.47	74	-20.95	31.56	6.34	37.32	152	87	Peak
5240	102.3	101.58			31.62	6.42	37.32	152	87	Average
5240	109.17	108.45			31.62	6.42	37.32	152	87	Peak
5396.2	41.63	40.6	54	-12.37	31.74	6.47	37.18	152	87	Average
5396.2	54.28	53.25	74	-19.72	31.74	6.47	37.18	152	87	Peak
*10480	54.88	57.72	68.2	-13.32	39.6	10.22	52.66	201	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**
5140.4	40.51	39.92	54	-13.49	31.56	6.33	37.3	104	33	Average
5140.4	52.14	51.55	74	-21.86	31.56	6.33	37.3	104	33	Peak
5240	101.57	100.85			31.62	6.42	37.32	104	33	Average
5240	108.65	107.93			31.62	6.42	37.32	104	33	Peak
5368.7	41.15	40.14	54	-12.85	31.72	6.47	37.18	104	33	Average
5368.7	53.17	52.16	74	-20.83	31.72	6.47	37.18	104	33	Peak
*10480	54.58	57.42	68.2	-13.62	39.6	10.22	52.66	201	147	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

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**	Getaz Yang

<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	99.57	98.05			32.21	6.78	37.47	139	262	Average
5745	108.05	106.53			32.21	6.78	37.47	139	262	Peak
11490	45.76	47.63	54	-8.24	40.25	10.66	52.78	201	125	Average
11490	55.27	57.14	74	-18.73	40.25	10.66	52.78	201	125	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	96.51	94.99			32.21	6.78	37.47	111	353	Average
5745	105.43	103.91			32.21	6.78	37.47	111	353	Peak
11490	44.98	46.85	54	-9.02	40.25	10.66	52.78	201	251	Average
11490	54.66	56.53	74	-19.34	40.25	10.66	52.78	201	251	Peak

<Ouf 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**
5638.35	51.21	49.75	68.2	-16.99	32.04	6.7	37.28	139	262	Peak
5662.1	52.79	51.36	77.18	-24.39	32.06	6.71	37.34	139	262	Peak
5915.275	53.79	51.94	75.37	-21.58	32.49	6.86	37.5	139	262	Peak
5930.95	52.42	50.54	68.2	-15.78	32.52	6.86	37.5	139	262	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**
5645.95	51.3	49.84	68.2	-16.9	32.04	6.7	37.28	111	353	Peak
5657.825	50.06	48.63	74.01	-23.95	32.06	6.71	37.34	111	353	Peak
5911.475	51.37	49.53	78.18	-26.81	32.49	6.85	37.5	111	353	Peak
5936.175	52.85	50.97	68.2	-15.35	32.52	6.86	37.5	111	353	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental Frequency

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**	Getaz Yang

<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	98.94	97.4			32.26	6.82	37.54	148	356	Average
5785	108.5	106.96			32.26	6.82	37.54	148	356	Peak
11570	45.73	47.85	54	-8.27	40.13	10.76	53.01	222	325	Average
11570	55.48	57.6	74	-18.52	40.13	10.76	53.01	222	325	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	99.68	98.14			32.26	6.82	37.54	146	258	Average
5785	109.2	107.66			32.26	6.82	37.54	146	258	Peak
11570	46.4	48.52	54	-7.6	40.13	10.76	53.01	111	127	Average
11570	56.01	58.13	74	-17.99	40.13	10.76	53.01	111	127	Peak

<Ouf 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**
5637.875	51.37	49.91	68.2	-16.83	32.04	6.7	37.28	148	356	Peak
5658.3	50.9	49.47	74.36	-23.46	32.06	6.71	37.34	148	356	Peak
5916.7	53.01	51.16	74.32	-21.31	32.49	6.86	37.5	148	356	Peak
5927.625	52.54	50.66	68.2	-15.66	32.52	6.86	37.5	148	356	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**
5619.825	52.37	50.89	68.2	-15.83	32.01	6.69	37.22	146	258	Peak
5658.3	50.56	49.13	74.36	-23.8	32.06	6.71	37.34	146	258	Peak
5917.175	52.65	50.8	73.97	-21.32	32.49	6.86	37.5	146	258	Peak
5936.65	53.24	51.36	68.2	-14.96	32.52	6.86	37.5	146	258	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental Frequency

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**	Getaz Yang

<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	99.05	97.39			32.35	6.84	37.53	142	262	Average
5825	106.89	105.23			32.35	6.84	37.53	142	262	Peak
11650	45.26	47.57	54	-8.74	40.03	10.8	53.14	102	147	Average
11650	55.55	57.86	74	-18.45	40.03	10.8	53.14	102	147	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	97.82	96.16			32.35	6.84	37.53	134	353	Average
5825	104.34	102.68			32.35	6.84	37.53	134	353	Peak
11650	46.22	48.53	54	-7.78	40.03	10.8	53.14	222	201	Average
11650	55.95	58.26	74	-18.05	40.03	10.8	53.14	222	201	Peak

<Ouf 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**
5639.775	50.85	49.39	68.2	-17.35	32.04	6.7	37.28	142	262	Peak
5664.95	50.76	49.33	79.3	-28.54	32.06	6.71	37.34	142	262	Peak
5918.6	51.54	49.69	72.92	-21.38	32.49	6.86	37.5	142	262	Peak
5932.85	52.08	50.2	68.2	-16.12	32.52	6.86	37.5	142	262	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**
5630.75	51.63	50.2	68.2	-16.57	32.01	6.7	37.28	134	353	Peak
5661.15	50.25	48.82	76.48	-26.23	32.06	6.71	37.34	134	353	Peak
5917.65	53.12	51.27	73.62	-20.5	32.49	6.86	37.5	134	353	Peak
5930	50.78	48.9	68.2	-17.42	32.52	6.86	37.5	134	353	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental Frequency

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**	Getaz Yang

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**
5146.85	51.97	51.39	54	-2.03	31.56	6.34	37.32	141	87	Average
5146.85	67.03	66.45	74	-6.97	31.56	6.34	37.32	141	87	Peak
5190	96.49	95.86			31.59	6.38	37.34	141	87	Average
5190	102.02	101.39			31.59	6.38	37.34	141	87	Peak
5452.96	40.08	38.88	54	-13.92	31.77	6.51	37.08	141	87	Average
5452.96	51.71	50.51	74	-22.29	31.77	6.51	37.08	141	87	Peak
*10380	54.29	57.03	68.2	-13.91	39.5	10.21	52.45	201	225	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	50.66	50.08	54	-3.34	31.56	6.34	37.32	102	36	Average
5149.7	67.61	67.03	74	-6.39	31.56	6.34	37.32	102	36	Peak
5190	91.49	90.86			31.59	6.38	37.34	102	36	Average
5190	102.6	101.97			31.59	6.38	37.34	102	36	Peak
5423.04	40.01	38.95	54	-13.99	31.75	6.49	37.18	102	36	Average
5423.04	51.63	50.57	74	-22.37	31.75	6.49	37.18	102	36	Peak
*10380	55.57	58.31	68.2	-12.63	39.5	10.21	52.45	111	125	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

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**	Getaz Yang

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	48.19	47.61	54	-5.81	31.56	6.34	37.32	143	92	Average
5147	68.97	68.39	74	-5.03	31.56	6.34	37.32	143	92	Peak
5230	97.89	97.18			31.62	6.41	37.32	143	92	Average
5230	106.1	105.39			31.62	6.41	37.32	143	92	Peak
5352.75	42.36	41.37	54	-11.64	31.7	6.47	37.18	143	92	Average
5352.75	57.23	56.24	74	-16.77	31.7	6.47	37.18	143	92	Peak
*10460	54.37	57.17	68.2	-13.83	39.57	10.22	52.59	201	145	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**
5148.2	47.17	46.59	54	-6.83	31.56	6.34	37.32	102	35	Average
5148.2	62.45	61.87	74	-11.55	31.56	6.34	37.32	102	35	Peak
5230	99.29	98.58			31.62	6.41	37.32	102	35	Average
5230	106.59	105.88			31.62	6.41	37.32	102	35	Peak
5350.77	41.32	40.33	54	-12.68	31.7	6.47	37.18	102	35	Average
5350.77	57.03	56.04	74	-16.97	31.7	6.47	37.18	102	35	Peak
*10460	54.74	57.54	68.2	-13.46	39.57	10.22	52.59	111	174	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

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**	Getaz Yang

<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	97.55	96			32.23	6.79	37.47	134	356	Average
5755	103.98	102.43			32.23	6.79	37.47	134	356	Peak
11510	46.08	47.97	54	-7.92	40.23	10.69	52.81	321	251	Average
11510	55.34	57.23	74	-18.66	40.23	10.69	52.81	321	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**
5755	97.66	96.11			32.23	6.79	37.47	139	261	Average
5755	104.62	103.07			32.23	6.79	37.47	139	261	Peak
11510	46.13	48.02	54	-7.87	40.23	10.69	52.81	222	201	Average
11510	55.88	57.77	74	-18.12	40.23	10.69	52.81	222	201	Peak

<Ouf 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**
5640.725	50.62	49.16	68.2	-17.58	32.04	6.7	37.28	134	356	Peak
5664.475	51.03	49.6	78.95	-27.92	32.06	6.71	37.34	134	356	Peak
5909.1	52.16	50.32	79.93	-27.77	32.49	6.85	37.5	134	356	Peak
5930.95	51.6	49.72	68.2	-16.6	32.52	6.86	37.5	134	356	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**
5638.35	51.8	13.06	68.2	-16.4	32.04	6.7	0	139	261	Peak
5664.95	53.24	14.47	79.3	-26.06	32.06	6.71	0	139	261	Peak
5913.375	53.03	13.68	76.77	-23.74	32.49	6.86	0	139	261	Peak
5932.85	52.9	13.52	68.2	-15.3	32.52	6.86	0	139	261	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental Frequency

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**	Getaz Yang

<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	98.98	97.4			32.29	6.83	37.54	138	262	Average
5795	106.65	105.07			32.29	6.83	37.54	138	262	Peak
11590	47.73	49.85	54	-6.27	40.11	10.78	53.01	145	121	Average
11590	55.95	58.07	74	-18.05	40.11	10.78	53.01	145	121	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	96.98	95.4			32.29	6.83	37.54	162	356	Average
5795	105.42	103.84			32.29	6.83	37.54	162	356	Peak
11590	46.4	48.52	54	-7.6	40.11	10.78	53.01	125	201	Average
11590	56.74	58.86	74	-17.26	40.11	10.78	53.01	125	201	Peak

<Ouf 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**
5630.75	51.89	50.46	68.2	-16.31	32.01	6.7	37.28	138	262	Peak
5657.35	50.89	49.46	73.66	-22.77	32.06	6.71	37.34	138	262	Peak
5918.125	53.92	52.07	73.27	-19.35	32.49	6.86	37.5	138	262	Peak
5938.55	53.71	51.79	68.2	-14.49	32.55	6.87	37.5	138	262	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**
5645.95	50.75	49.29	68.2	-17.45	32.04	6.7	37.28	162	356	Peak
5660.675	51.58	50.15	76.13	-24.55	32.06	6.71	37.34	162	356	Peak
5919.55	51.08	49.23	72.22	-21.14	32.49	6.86	37.5	162	356	Peak
5930	51.53	49.65	68.2	-16.67	32.52	6.86	37.5	162	356	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental Frequency

9 kHz ~ 30 MHz Data:

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

30 MHz ~ 1 GHz Worst-Case Data:

802.11n (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) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Jisyong Wang

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
134.76	22.89	41.73	43.5	-20.61	12.01	0.91	31.76	111	185	Peak
189.08	24.01	44.41	43.5	-19.49	10.12	1.17	31.69	201	125	Peak
243.4	23.5	42.7	46	-22.5	11.19	1.45	31.84	222	265	Peak
296.75	23.26	40.56	46	-22.74	12.85	1.64	31.79	321	265	Peak
351.07	27.68	43.48	46	-18.32	14.17	1.88	31.85	111	1743	Peak
431.58	26.63	40.48	46	-19.37	15.96	2.2	32.01	111	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
32.91	25.9	44.06	40	-14.1	12.47	0.46	31.09	222	214	Peak
189.08	25.05	45.45	43.5	-18.45	10.12	1.17	31.69	102	145	Peak
351.07	25.06	40.86	46	-20.94	14.17	1.88	31.85	201	274	Peak
405.39	26.46	40.95	46	-19.54	15.45	2.11	32.05	222	265	Peak
431.58	27.3	41.15	46	-18.7	15.96	2.2	32.01	235	265	Peak
513.06	29.49	40.88	46	-16.51	17.62	2.57	31.58	221	185	Peak

Remarks:

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

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, 2017	Sep. 04, 2018
LISN/AMN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 15, 2017	Aug. 14, 2018
Software ADT	BV ADT_Cond_ V7.3.7.3	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

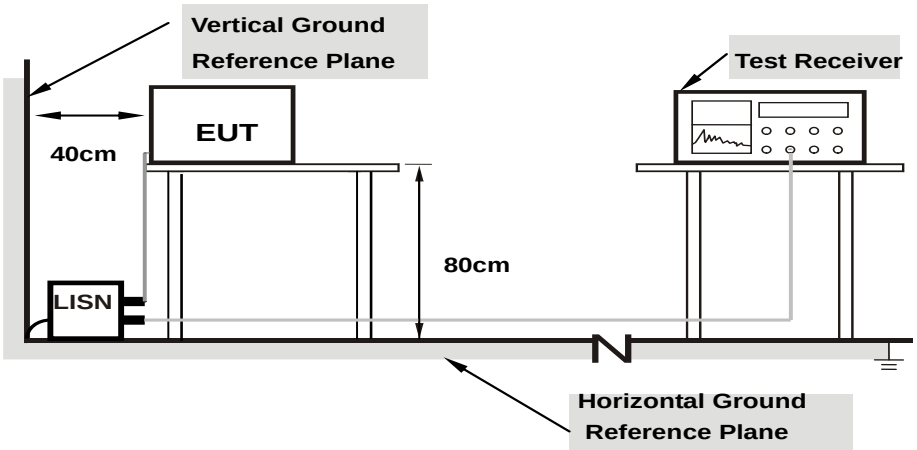
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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.

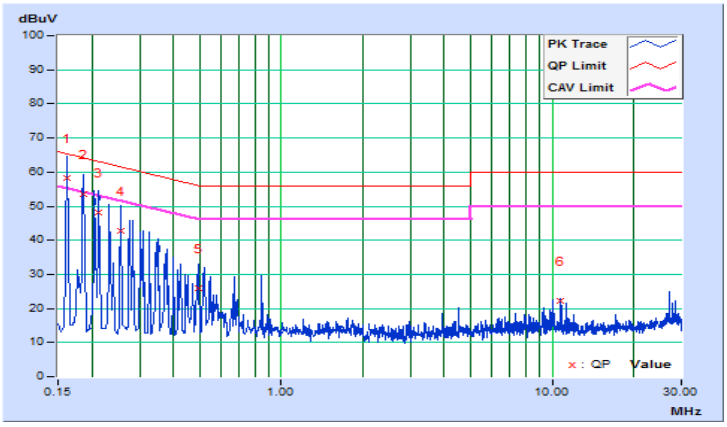
4.2.7 Test Results

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	Getaz Yang	Test Date	2017/12/19

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	0.16173	10.39	48.01	17.06	58.40	27.45	65.37	55.37	-6.97	-27.92
2	0.18519	10.39	43.13	12.74	53.52	23.13	64.25	54.25	-10.73	-31.12
3	0.21256	10.39	37.86	8.48	48.25	18.87	63.10	53.10	-14.85	-34.23
4	0.25557	10.40	32.32	4.50	42.72	14.90	61.57	51.57	-18.85	-36.67
5	0.49408	10.41	15.67	2.48	26.08	12.89	56.10	46.10	-30.02	-33.21
6	10.71873	10.89	11.50	10.64	22.39	21.53	60.00	50.00	-37.61	-28.47

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

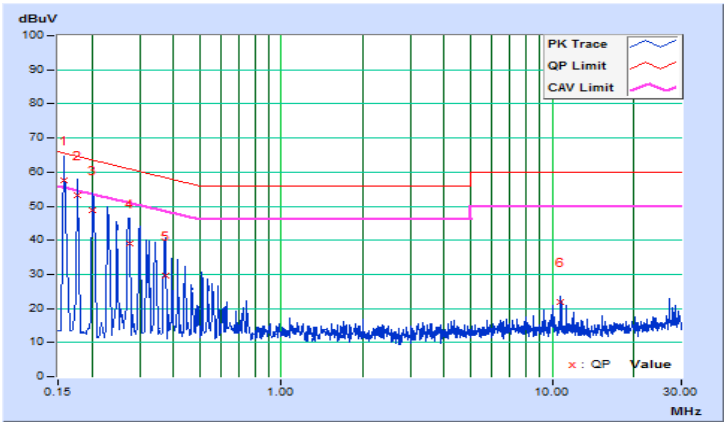


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Getaz Yang	Test Date	2017/12/19

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15782	10.16	47.42	16.55	57.58	26.71	65.58	55.58	-8.00	-28.87
2	0.17737	10.16	42.97	12.60	53.13	22.76	64.61	54.61	-11.48	-31.85
3	0.20084	10.16	38.80	9.14	48.96	19.30	63.58	53.58	-14.62	-34.28
4	0.27480	10.16	28.92	2.49	39.08	12.65	60.97	50.97	-21.89	-38.32
5	0.37287	10.17	19.43	-1.46	29.60	8.71	58.44	48.44	-28.84	-39.73
6	10.71873	10.61	11.40	10.67	22.01	21.28	60.00	50.00	-37.99	-28.72

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

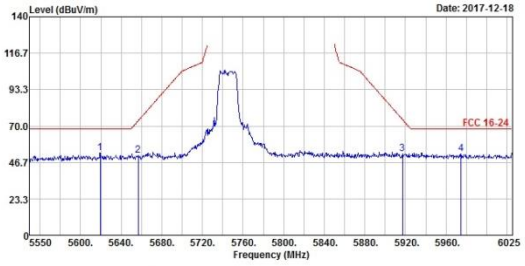
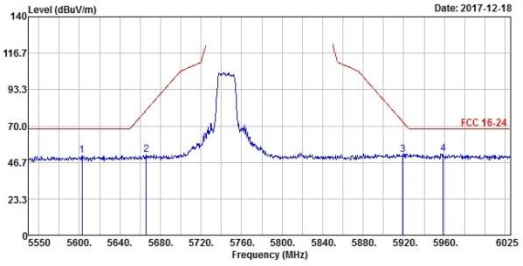
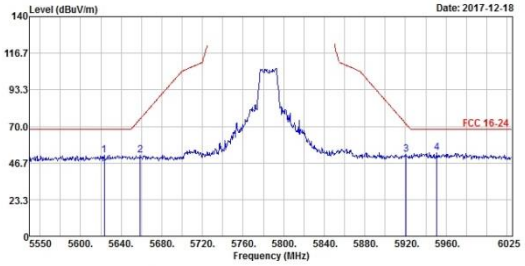
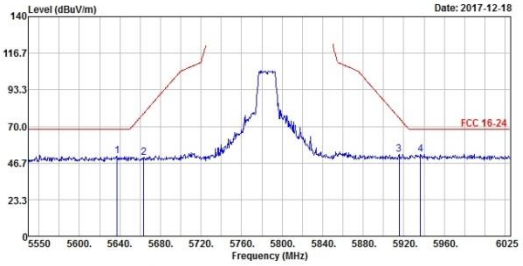
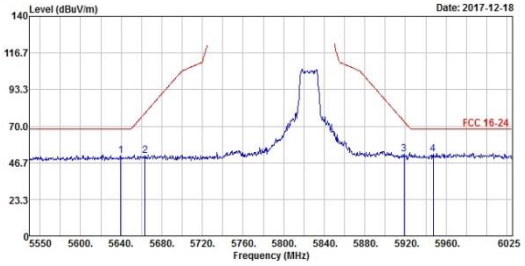
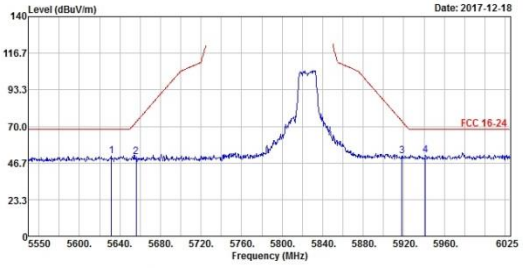


5 Pictures of Test Arrangements

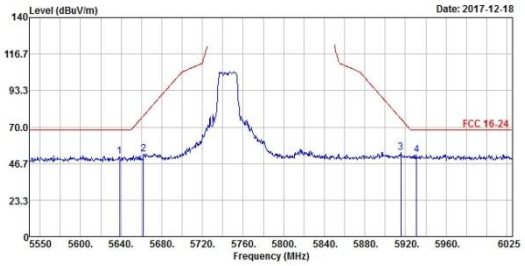
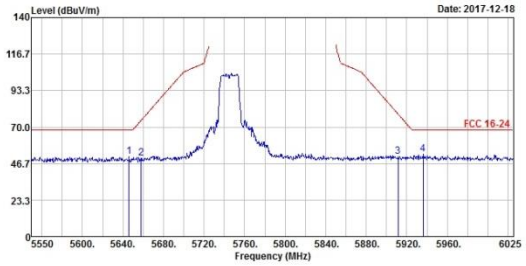
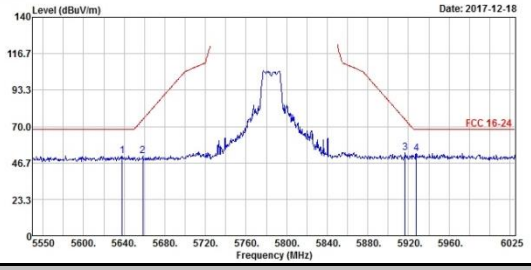
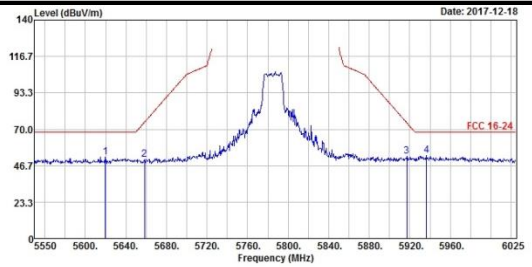
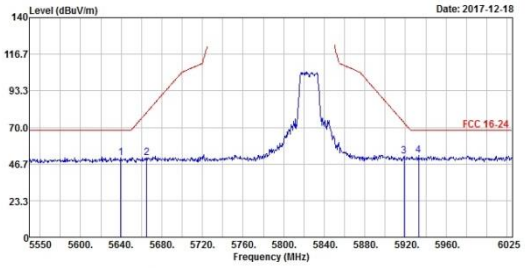
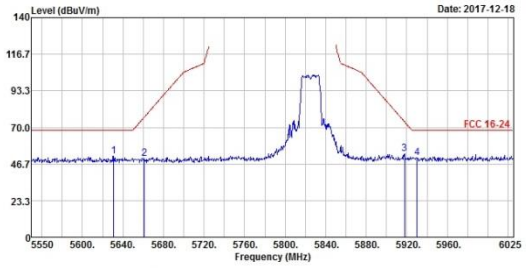
Please refer to the attached file (Test Setup Photo).

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**
	
Ch 157	
Horizontal	**Vertical**
	
Ch 165	
Horizontal	**Vertical**
	

802.11n (HT40)

Ch 151	
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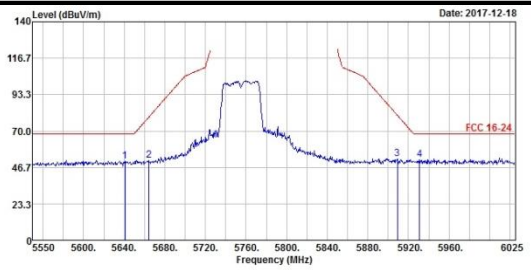
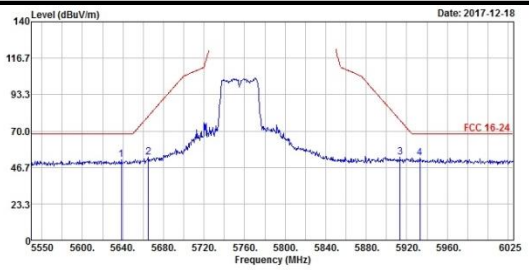
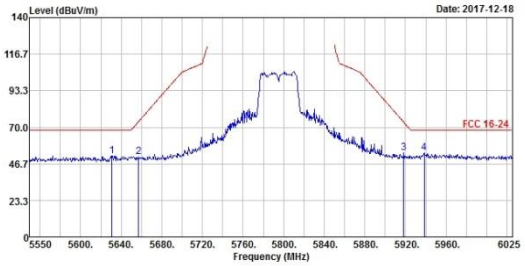
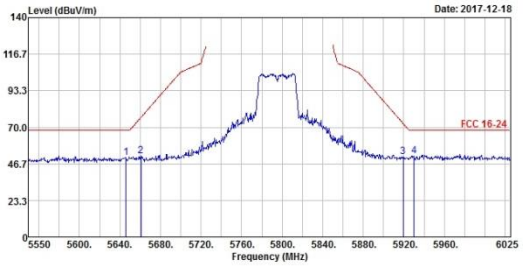
	
Ch 159	
Horizontal	**Vertical**
	

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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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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