FCC Test Report

Report No.:	RF191030C08-1
FCC ID:	RX3-WBU053VZ
Test Model:	WBU053-VZ
Received Date:	Oct. 30, 2019
Test Date:	Nov. 05 ~ Nov. 24, 2019
Issued Date:	Nov. 25, 2019
Applicant:	Hon Hai Precision Industry Co., Ltd.
Address:	No.151, Sec. 1, Nankan Rd., Lujhu Dist., Taoyuan County 33859, Taiwan (R.O.C.)
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location (1):	B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
Test Location (2):	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	427177 / TW0011 788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF191030C08-1	Original Release	Nov. 25, 2019

1 Certificate of Conformity

Product:	Wireless Module
Brand:	Foxconn
Test Model:	WBU053-VZ
Sample Status:	Engineering Sample
Applicant:	Hon Hai Precision Industry Co., Ltd.
Test Date:	Nov. 05 ~ Nov. 24, 2019
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 : _____ , **Date:** Nov. 25, 2019

Gina Liu / Specialist

Approved by : _____ , **Date:** Nov. 25, 2019

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 -22.1 dB at 24.578 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 -1.12 dB at 5150 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless Module
Brand	Foxconn
Test Model	WBU053-VZ
Status of EUT	Engineering Sample
Power Supply Rating	4.5 ~ 5.5 Vdc
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 300.0 Mbps
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5720 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5500 ~ 5720 MHz: 12 for 802.11a, 802.11n (HT20) 6 for 802.11n (HT40) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
Output Power	48.09 mW for 5180 ~ 5240 MHz 48.652 mW for 5260 ~ 5320 MHz 48.87 mW for 5500 ~ 5720 MHz 47.98 mW for 5745 ~ 5825 MHz
Antenna Type	5180 ~ 5240 MHz PCB antenna with -0.22 dBi gain (ANT0) / 1.86 dBi gain (ANT1) 5260 ~ 5320 MHz PCB antenna with -0.22 dBi gain (ANT0) / 1.86 dBi gain (ANT1) 5500 ~ 5720 MHz PCB antenna with 2.89 dBi gain (ANT0) / 3.07 dBi gain (ANT1) 5745 ~ 5825 MHz PCB antenna with 1.86 dBi gain (ANT0) / 2.44 dBi gain (ANT1)
Antenna Connector	N/A
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	Tx Function
802.11a	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX

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 5260 ~ 5320 MHz

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
56	5280	64	5320

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

For 5500 ~ 5720 MHz

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

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
104	5520	128	5640
108	5540	132	5660
112	5560	136	5680
116	5580	140	5700
120	5600	144	5720

6 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	126	5630
110	5550	134	5670
118	5590	142	5710

For 5745 ~ 5825 MHz:

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

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

2 channels are provided for 802.11n (HT40):

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

Note:
1. The EUT had been pre-tested on the positioned of each 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, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	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

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
-	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
-	5500-5720	802.11a	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.0
-		802.11n (HT20)	100 to 144	100, 116, 140, 144	OFDM	BPSK	6.5
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	13.5
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Charles Hsiao
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Harry Hsueh
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jones Chang
APCM	25 deg. C, 65 % RH	5 Vdc	Gavin Wu

3.3 Duty Cycle of Test Signal

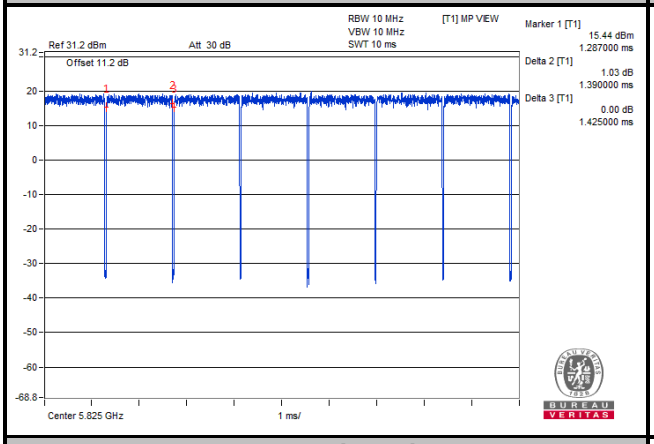
MODULATION TYPE: BPSK

802.11a: Duty cycle = 1.39/1.425 = 0.975, Duty factor = 10 * log(1/0.975) = 0.11

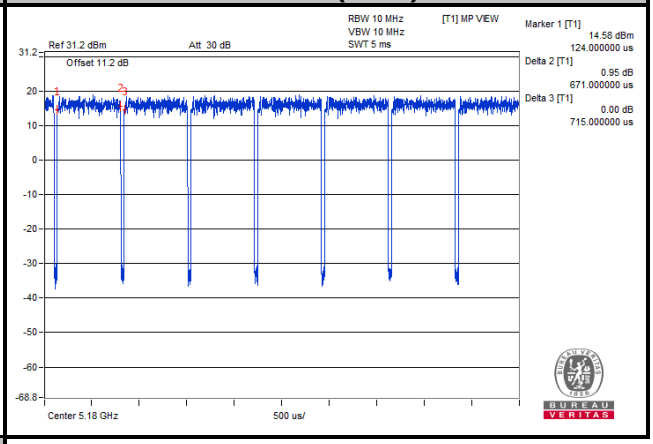
802.11n (HT20): Duty cycle = 0.671/0.715 = 0.938, Duty factor = 10 * log(1/0.938) = 0.28

802.11n (HT40): Duty cycle = 0.347/0.383 = 0.906, Duty factor = 10 * log(1/0.906) = 0.43

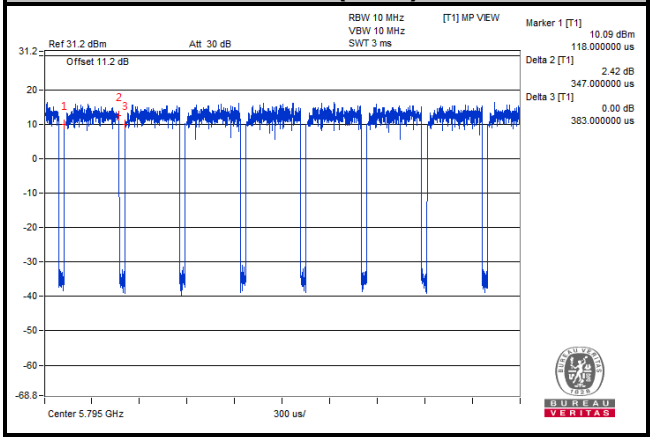
802.11a



802.11n (HT20)



802.11n (HT40)



3.4 Description of Support Units

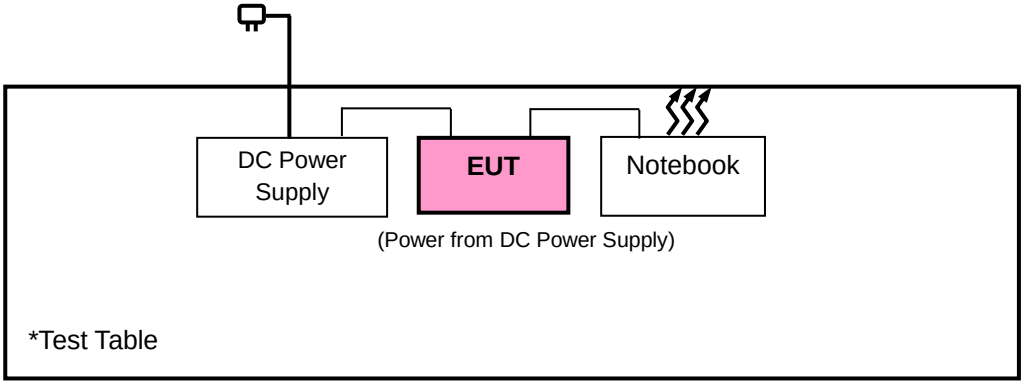
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	DC Power Supply	Topward	3303D	803136	N/A

Note:

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

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output 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

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedures New Rules v02r01</td><td colspan="2">Field Strength at 3 m</td></tr>
<tr><td>PK: 74 (dBµV/m)</td><td>AV: 54 (dBµV/m)</td></tr>
<tr><th>Frequency Band</th><th colspan="2">Applicable To</th><th>EIRP Limit</th><th>Equivalent Field Strength at 3 m</th></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2 (dBµV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td rowspan="2">5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2 (dBµV/m) *1
PK:105.2 (dBµV/m) *2
PK: 110.8 (dBµV/m) *3
PK:122.2 (dBµV/m) *4</td></tr>
<tr><td>☐</td><td>15.407(b)(4)(ii)</td><td colspan="2">Emission limits in section 15.247(d)</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

Note:

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

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

4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 26, 2019	Aug. 25, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSW26	102023	Oct. 08, 2019	Oct. 07, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 27, 2018	Nov. 26, 2019
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 25, 2018	Nov. 24, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
Loop Antenna	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
Preamplifier Agilent	310N	187226	Jun. 18, 2019	Jun. 17, 2020
Preamplifier Agilent	83017A	MY39501357	Jun. 18, 2019	Jun. 17, 2020
Preamplifier EMCI	EMC 184045	980116	Oct. 08, 2019	Oct. 07, 2020
Power Meter Anritsu	ML2495A	1012010	Sep. 04, 2019	Sep. 03, 2020
Power Sensor Anritsu	MA2411B	1315050	Sep. 04, 2019	Sep. 03, 2020
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 18, 2019	Jun. 17, 2020
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 18, 2019	Jun. 17, 2020
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
DC Power Supply Topward	3303D	803136	NA	NA
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 10, 2019	Sep. 09, 2020

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.

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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated Emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

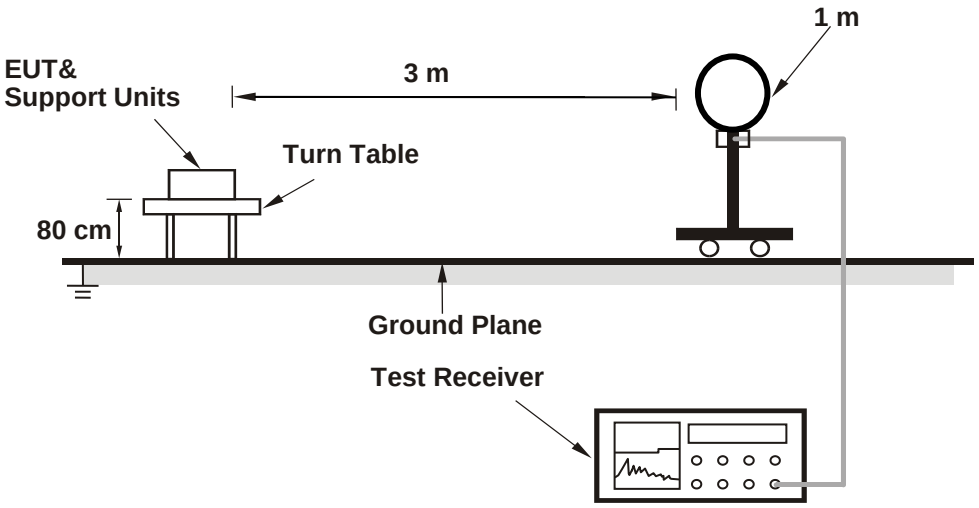
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK)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

4.1.5 Deviation from Test Standard

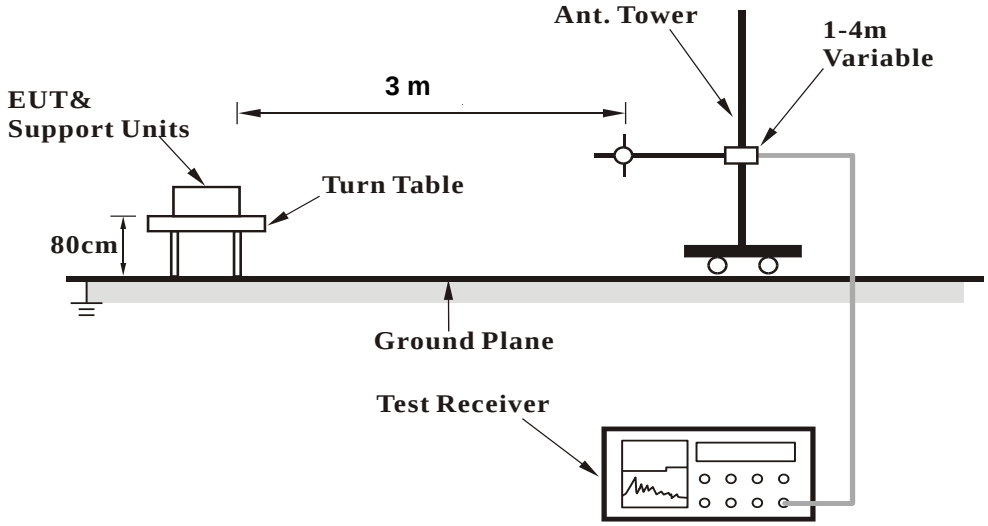
No deviation.

4.1.6 Test Setup

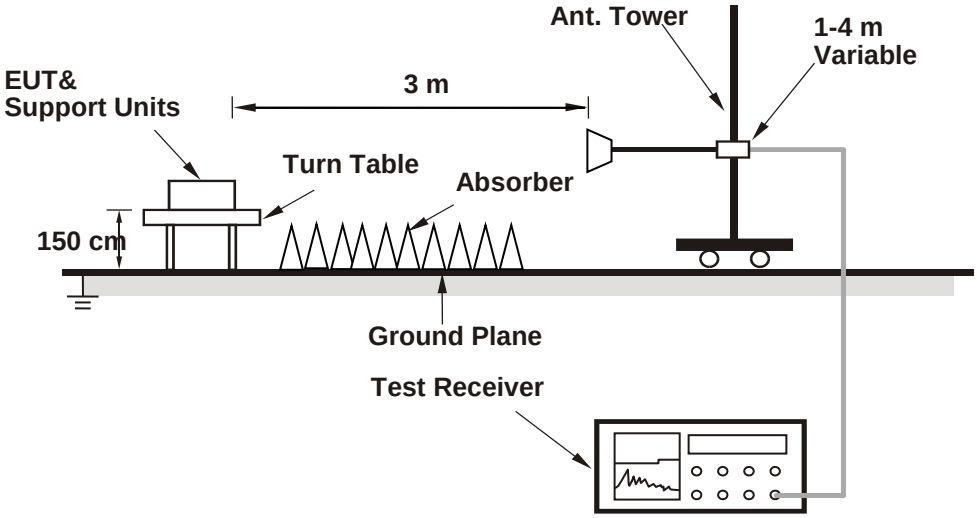
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.7 EUT Operating Conditions

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

4.1.8 Test Results

Above 1 GHz Data：

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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.25	44.15	34.1	10.05	54	-9.85	103	134	Average
5149.25	53.87	43.82	10.05	74	-20.13	103	134	Peak
5180	101.37	91.25	10.12			103	134	Average
5180	108.88	98.76	10.12			103	134	Peak
*10360	54.81	38.79	16.02	68.2	-13.39	157	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5149.7	42.04	31.99	10.05	54	-11.96	100	307	Average
5149.7	52.84	42.79	10.05	74	-21.16	100	307	Peak
5180	92.64	82.52	10.12			100	307	Average
5180	99.21	89.09	10.12			100	307	Peak
*10360	55.46	39.44	16.02	68.2	-12.74	112	119	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5146.25	43.5	33.45	10.05	54	-10.5	103	134	Average
5146.25	53.76	43.71	10.05	74	-20.24	103	134	Peak
5200	101.36	91.2	10.16			103	134	Average
5200	108.03	97.87	10.16			103	134	Peak
5448.67	41.87	31.38	10.49	54	-12.13	103	134	Average
5448.67	52.35	41.86	10.49	74	-21.65	103	134	Peak
*10400	56.35	40.17	16.18	68.2	-11.85	103	356	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5099.9	41.89	31.96	9.93	54	-12.11	100	307	Average
5099.9	52.85	42.92	9.93	74	-21.15	100	307	Peak
5200	92.11	81.95	10.16			100	307	Average
5200	99.71	89.55	10.16			100	307	Peak
5351.76	41.9	31.67	10.23	54	-12.1	100	307	Average
5351.76	52.4	42.17	10.23	74	-21.6	100	307	Peak
*10400	55.47	39.29	16.18	68.2	-12.73	114	275	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	101.84	91.7	10.14			103	134	Average
5240	108.53	98.39	10.14			103	134	Peak
5358.58	41.81	31.56	10.25	54	-12.19	103	134	Average
5358.58	52.83	42.58	10.25	74	-21.17	103	134	Peak
*10480	54.49	38.59	15.9	68.2	-13.71	119	254	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	92.55	82.41	10.14			100	307	Average
5240	99.83	89.69	10.14			100	307	Peak
5440.75	41.77	31.29	10.48	54	-12.23	100	307	Average
5440.75	52.56	42.08	10.48	74	-21.44	100	307	Peak
*10480	55.52	39.62	15.9	68.2	-12.68	164	322	Peak

Remarks:

1. Emission Level = Read Level + 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 52	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5131.7	43.02	33.02	10	54	-10.98	100	135	Average
5131.7	53.97	43.97	10	74	-20.03	100	135	Peak
5260	102.54	92.42	10.12			100	135	Average
5260	109.41	99.29	10.12			100	135	Peak
*10520	54.63	38.75	15.88	68.2	-13.57	195	213	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5099	41.84	31.91	9.93	54	-12.16	222	290	Average
5099	53.05	43.12	9.93	74	-20.95	222	290	Peak
5260	94.67	84.55	10.12			222	290	Average
5260	101.04	90.92	10.12			222	290	Peak
*10520	56.57	40.69	15.88	68.2	-11.63	140	277	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 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 60	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5142.2	42.54	32.53	10.01	54	-11.46	100	135	Average
5142.2	53.08	43.07	10.01	74	-20.92	100	135	Peak
5300	101.43	91.37	10.06			100	135	Average
5300	108.38	98.32	10.06			100	135	Peak
5351.87	42.49	32.26	10.23	54	-11.51	100	135	Average
5351.87	53.26	43.03	10.23	74	-20.74	100	135	Peak
10600	46.98	31.22	15.76	54	-7.02	187	8	Average
10600	55.16	39.4	15.76	74	-18.84	187	8	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5099.3	41.88	31.95	9.93	54	-12.12	222	290	Average
5099.3	52.35	42.42	9.93	74	-21.65	222	290	Peak
5300	93.66	83.6	10.06			222	290	Average
5300	100.72	90.66	10.06			222	290	Peak
5350.88	41.89	31.66	10.23	54	-12.11	222	290	Average
5350.88	52.35	42.12	10.23	74	-21.65	222	290	Peak
10600	47.08	31.32	15.76	54	-6.92	109	166	Average
10600	55.11	39.35	15.76	74	-18.89	109	166	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 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 64	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	100.7	90.61	10.09			100	135	Average
5320	107.49	97.4	10.09			100	135	Peak
5350.22	44.97	34.74	10.23	54	-9.03	100	135	Average
5350.22	53.73	43.5	10.23	74	-20.27	100	135	Peak
10640	47.46	31.47	15.99	54	-6.54	158	55	Average
10640	55.98	39.99	15.99	74	-18.02	158	55	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	93.88	83.79	10.09			222	290	Average
5320	100.92	90.83	10.09			222	290	Peak
5350	42.03	31.8	10.23	54	-11.97	222	290	Average
5350	53.32	43.09	10.23	74	-20.68	222	290	Peak
10640	47.61	31.62	15.99	54	-6.39	134	310	Average
10640	54.98	38.99	15.99	74	-19.02	134	310	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 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 100	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.32	43.81	33.3	10.51	54	-10.19	115	139	Average
5458.32	54.42	43.91	10.51	74	-19.58	115	139	Peak
*5469.04	54.85	44.32	10.53	68.2	-13.35	115	139	Peak
5500	99.95	89.35	10.6			115	139	Average
5500	106.39	95.79	10.6			115	139	Peak
11000	47.4	31.27	16.13	54	-6.6	164	4	Average
11000	56.13	40	16.13	74	-17.87	164	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5449.2	42.24	31.75	10.49	54	-11.76	202	288	Average
5449.2	52.62	42.13	10.49	74	-21.38	202	288	Peak
*5469.68	55.43	44.9	10.53	68.2	-12.77	202	288	Peak
5500	97.76	87.16	10.6			202	288	Average
5500	104.16	93.56	10.6			202	288	Peak
11000	47.41	31.28	16.13	54	-6.59	137	228	Average
11000	56.13	40	16.13	74	-17.87	137	228	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 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 116	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5452.08	42.2	31.69	10.51	54	-11.8	115	139	Average
5452.08	52.75	42.24	10.51	74	-21.25	115	139	Peak
*5469.2	51.04	40.51	10.53	68.2	-17.16	115	139	Peak
5580	99.26	88.55	10.71			115	139	Average
5580	106.22	95.51	10.71			115	139	Peak
*5725.08	51.92	41	10.92	68.2	-16.28	115	139	Peak
11160	47.75	31.39	16.36	54	-6.25	184	200	Average
11160	57.84	41.48	16.36	74	-16.16	184	200	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.96	42.06	31.55	10.51	54	-11.94	202	288	Average
5458.96	53.19	42.68	10.51	74	-20.81	202	288	Peak
*5469.68	51.25	40.72	10.53	68.2	-16.95	202	288	Peak
5580	97.91	87.2	10.71			202	288	Average
5580	104.32	93.61	10.71			202	288	Peak
*5725	52.21	41.29	10.92	68.2	-15.99	202	288	Peak
11160	47.88	31.52	16.36	54	-6.12	186	157	Average
11160	57.09	40.73	16.36	74	-16.91	186	157	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 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 140	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	98.58	87.63	10.95			115	139	Average
5700	105.94	94.99	10.95			115	139	Peak
*5725.56	59.29	48.37	10.92	68.2	-8.91	115	139	Peak
11400	47.61	31.42	16.19	54	-6.39	156	285	Average
11400	56.85	40.66	16.19	74	-17.15	156	285	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	95.84	84.89	10.95			202	288	Average
5700	102.1	91.15	10.95			202	288	Peak
*5725.72	57.57	46.65	10.92	68.2	-10.63	202	288	Peak
11400	47.77	31.58	16.19	54	-6.23	137	44	Average
11400	57.45	41.26	16.19	74	-16.55	137	44	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 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 144	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5447.28	41.84	31.35	10.49	54	-12.16	115	139	Average
5447.28	52.97	42.48	10.49	74	-21.03	115	139	Peak
*5469.36	51.52	40.99	10.53	68.2	-16.68	115	139	Peak
5720	97.71	86.79	10.92			115	139	Average
5720	104.34	93.42	10.92			115	139	Peak
11440	47.78	31.49	16.29	54	-6.22	140	178	Average
11440	57.27	40.98	16.29	74	-16.73	140	178	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5448.88	42	31.51	10.49	54	-12	202	288	Average
5448.88	52.64	42.15	10.49	74	-21.36	202	288	Peak
*5469.2	51.75	41.22	10.53	68.2	-16.45	202	288	Peak
5720	95.88	84.96	10.92			202	288	Average
5720	102.72	91.8	10.92			202	288	Peak
11440	47.61	31.32	16.29	54	-6.39	176	274	Average
11440	56.97	40.68	16.29	74	-17.03	176	274	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	98.34	87.46	10.88			115	139	Average
5745	105.97	95.09	10.88			115	139	Peak
11490	47.7	31.23	16.47	54	-6.3	157	142	Average
11490	56.82	40.35	16.47	74	-17.18	157	142	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	98.34	87.46	10.88			202	288	Average
5745	105.38	94.5	10.88			202	288	Peak
11490	48.59	32.12	16.47	54	-5.41	169	158	Average
11490	57.14	40.67	16.47	74	-16.86	169	158	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5642.275	52.68	41.85	10.83	68.2	-15.52	115	139	Peak
5651.2	51.38	40.51	10.87	69.09	-17.71	115	139	Peak
5920	51.76	40.67	11.09	71.9	-20.14	115	139	Peak
*5926.3	52.84	41.73	11.11	68.2	-15.36	115	139	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5649.625	53.37	42.5	10.87	68.2	-14.83	202	288	Peak
5654.875	52.29	41.42	10.87	71.81	-19.52	202	288	Peak
5921.05	49.87	38.78	11.09	71.12	-21.25	202	288	Peak
*6025	52.31	40.94	11.37	68.2	-15.89	202	288	Peak

Remarks:

1. Emission Level = Read Level + 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	97.04	86.23	10.81			115	139	Average
5785	105.39	94.58	10.81			115	139	Peak
11570	47.63	31.14	16.49	54	-6.37	215	142	Average
11570	56.32	39.83	16.49	74	-17.68	215	142	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	98.37	87.56	10.81			202	288	Average
5785	105.08	94.27	10.81			202	288	Peak
11570	47.7	31.21	16.49	54	-6.3	105	196	Average
11570	55.69	39.2	16.49	74	-18.31	105	196	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5598.175	52.5	41.75	10.75	68.2	-15.7	115	139	Peak
5653.3	49.15	38.28	10.87	70.64	-21.49	115	139	Peak
5922.625	50.71	39.6	11.11	69.96	-19.25	115	139	Peak
*5958.325	52.96	41.75	11.21	68.2	-15.24	115	139	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5614.975	52.82	42.05	10.77	68.2	-15.38	202	288	Peak
5656.45	52.04	41.17	10.87	72.97	-20.93	202	288	Peak
5922.625	50.68	39.57	11.11	69.96	-19.28	202	288	Peak
*6005.05	53.09	41.76	11.33	68.2	-15.11	202	288	Peak

Remarks:

1. Emission Level = Read Level + 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	96.44	85.56	10.88			115	139	Average
5825	104.37	93.49	10.88			115	139	Peak
11650	48.3	31.52	16.78	54	-5.7	109	21	Average
11650	56.32	39.54	16.78	74	-17.68	109	21	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	98.77	87.89	10.88			181	282	Average
5825	105.65	94.77	10.88			181	282	Peak
11650	48.11	31.33	16.78	54	-5.89	295	214	Average
11650	55.77	38.99	16.78	74	-18.23	295	214	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5641.75	52.79	41.96	10.83	68.2	-15.41	115	139	Peak
5652.25	51.75	40.88	10.87	69.86	-18.11	115	139	Peak
5921.575	51.37	40.26	11.11	70.73	-19.36	115	139	Peak
*5995.075	53.27	41.94	11.33	68.2	-14.93	115	139	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5525.725	52.53	41.88	10.65	68.2	-15.67	181	282	Peak
5656.45	49.56	38.69	10.87	72.97	-23.41	181	282	Peak
5919.475	51.39	40.3	11.09	72.29	-20.9	181	282	Peak
*5959.375	52.7	41.49	11.21	68.2	-15.5	181	282	Peak

Remarks:

1. Emission Level = Read Level + 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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5144.45	44.28	34.23	10.05	54	-9.72	103	134	Average
5144.45	55.71	45.66	10.05	74	-18.29	103	134	Peak
5180	100.34	90.22	10.12			103	134	Average
5180	107.57	97.45	10.12			103	134	Peak
*10360	55.42	39.4	16.02	68.2	-12.78	195	27	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5126.45	42.03	32.03	10	54	-11.97	100	307	Average
5126.45	52.96	42.96	10	74	-21.04	100	307	Peak
5180	91.11	80.99	10.12			100	307	Average
5180	98.08	87.96	10.12			100	307	Peak
*10360	55.06	39.04	16.02	68.2	-13.14	118	247	Peak

Remarks:

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

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

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.8	33.75	10.05	54	-10.2	103	134	Average
5150	53.99	43.94	10.05	74	-20.01	103	134	Peak
5200	100.22	90.06	10.16			103	134	Average
5200	107.37	97.21	10.16			103	134	Peak
5454.61	41.79	31.28	10.51	54	-12.21	103	134	Average
5454.61	53.42	42.91	10.51	74	-20.58	103	134	Peak
*10400	55.07	38.89	16.18	68.2	-13.13	190	212	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5116.55	41.92	31.96	9.96	54	-12.08	100	307	Average
5116.55	52.22	42.26	9.96	74	-21.78	100	307	Peak
5200	91.78	81.62	10.16			100	307	Average
5200	98.2	88.04	10.16			100	307	Peak
5445.81	41.78	31.29	10.49	54	-12.22	100	307	Average
5445.81	53.01	42.52	10.49	74	-20.99	100	307	Peak
*10400	54.94	38.76	16.18	68.2	-13.26	184	156	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	99.59	57.72	41.87			103	134	Average
5240	106.49	64.62	41.87			103	134	Peak
5451.75	41.89	31.38	10.51	54	-12.11	103	134	Average
5451.75	52.46	41.95	10.51	74	-21.54	103	134	Peak
*10480	54.39	38.49	15.9	68.2	-13.81	148	205	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5240	90.55	80.41	10.14			100	307	Average
5240	97.88	87.74	10.14			100	307	Peak
5454.72	41.91	31.4	10.51	54	-12.09	100	307	Average
5454.72	52.37	41.86	10.51	74	-21.63	100	307	Peak
*10480	55.67	39.77	15.9	68.2	-12.53	137	76	Peak

Remarks:

1. Emission Level = Read Level + 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 52	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5132.3	42.95	32.95	10	54	-11.05	100	135	Average
5132.3	53.8	43.8	10	74	-20.2	100	135	Peak
5260	100.73	90.61	10.12			100	135	Average
5260	107.3	97.18	10.12			100	135	Peak
*10520	54.93	39.05	15.88	68.2	-13.27	118	302	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5123.3	41.93	31.94	9.99	54	-12.07	222	290	Average
5123.3	53.62	43.63	9.99	74	-20.38	222	290	Peak
5260	93.6	83.48	10.12			222	290	Average
5260	100.24	90.12	10.12			222	290	Peak
*10520	55.05	39.17	15.88	68.2	-13.15	145	288	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5260 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 60	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5141.15	42.55	32.54	10.01	54	-11.45	100	135	Average
5141.15	53.79	43.78	10.01	74	-20.21	100	135	Peak
5300	99.82	89.76	10.06			100	135	Average
5300	106.35	96.29	10.06			100	135	Peak
5353.63	42.62	32.39	10.23	54	-11.38	100	135	Average
5353.63	52.81	42.58	10.23	74	-21.19	100	135	Peak
10600	47.04	31.28	15.76	54	-6.96	142	2	Average
10600	55.91	40.15	15.76	74	-18.09	142	2	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5141.15	42.04	32.03	10.01	54	-11.96	222	290	Average
5141.15	52.47	42.46	10.01	74	-21.53	222	290	Peak
5300	92.41	82.35	10.06			222	290	Average
5300	99.92	89.86	10.06			222	290	Peak
5369.14	41.91	31.65	10.26	54	-12.09	222	290	Average
5369.14	53.01	42.75	10.26	74	-20.99	222	290	Peak
10600	47.09	31.33	15.76	54	-6.91	154	195	Average
10600	54.96	39.2	15.76	74	-19.04	154	195	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5300 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 64	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	99.85	89.76	10.09			100	135	Average
5320	106.33	96.24	10.09			100	135	Peak
5350	44.35	34.12	10.23	54	-9.65	100	135	Average
5350	54.36	44.13	10.23	74	-19.64	100	135	Peak
10640	47.42	31.43	15.99	54	-6.58	134	311	Average
10640	55.44	39.45	15.99	74	-18.56	134	311	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5320	92.3	82.21	10.09			222	290	Average
5320	99.33	89.24	10.09			222	290	Peak
5354.51	42.03	31.8	10.23	54	-11.97	222	290	Average
5354.51	52.32	42.09	10.23	74	-21.68	222	290	Peak
10640	47.54	31.55	15.99	54	-6.46	137	78	Average
10640	54.25	38.26	15.99	74	-19.75	137	78	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5320 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 100	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458.16	43.81	33.3	10.51	54	-10.19	115	139	Average
5458.16	53.9	43.39	10.51	74	-20.1	115	139	Peak
*5469.36	54.59	44.06	10.53	68.2	-13.61	115	139	Peak
5500	97.36	86.76	10.6			115	139	Average
5500	104.06	93.46	10.6			115	139	Peak
11000	47.58	31.45	16.13	54	-6.42	195	4	Average
11000	56.13	40	16.13	74	-17.87	195	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.6	42.31	31.8	10.51	54	-11.69	202	288	Average
5459.6	52.89	42.38	10.51	74	-21.11	202	288	Peak
*5469.04	52.41	41.88	10.53	68.2	-15.79	202	288	Peak
5500	95.25	84.65	10.6			202	288	Average
5500	102.4	91.8	10.6			202	288	Peak
11000	47.54	31.41	16.13	54	-6.46	164	122	Average
11000	55.17	39.04	16.13	74	-18.83	164	122	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5500 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 116	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5453.84	42.23	31.72	10.51	54	-11.77	115	139	Average
5453.84	53.36	42.85	10.51	74	-20.64	115	139	Peak
*5469.68	52.14	41.61	10.53	68.2	-16.06	115	139	Peak
5580	97.73	87.02	10.71			115	139	Average
5580	104.47	93.76	10.71			115	139	Peak
*5725.16	52.46	41.54	10.92	68.2	-15.74	115	139	Peak
11160	47.82	31.46	16.36	54	-6.18	105	4	Average
11160	57.46	41.1	16.36	74	-16.54	105	4	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5445.68	41.97	31.48	10.49	54	-12.03	202	288	Average
5445.68	53.82	43.33	10.49	74	-20.18	202	288	Peak
*5469.36	51.3	40.77	10.53	68.2	-16.9	202	288	Peak
5580	95.74	85.03	10.71			202	288	Average
5580	102.16	91.45	10.71			202	288	Peak
*5725.56	52.65	41.73	10.92	68.2	-15.55	202	288	Peak
11160	47.84	31.48	16.36	54	-6.16	137	215	Average
11160	57.08	40.72	16.36	74	-16.92	137	215	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5580 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 140	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	96.4	85.45	10.95			115	139	Average
5700	103.3	92.35	10.95			115	139	Peak
*5725.16	61.86	50.94	10.92	68.2	-6.34	115	139	Peak
11400	47.64	31.45	16.19	54	-6.36	185	19	Average
11400	56.86	40.67	16.19	74	-17.14	185	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5700	94.44	83.49	10.95			202	288	Average
5700	101.24	90.29	10.95			202	288	Peak
*5725.64	59.65	48.73	10.92	68.2	-8.55	202	288	Peak
11400	47.56	31.37	16.19	54	-6.44	182	248	Average
11400	56.62	40.43	16.19	74	-17.38	182	248	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5700 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 144	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5439.92	41.89	31.41	10.48	54	-12.11	115	139	Average
5439.92	52.68	42.2	10.48	74	-21.32	115	139	Peak
*5469.52	50.35	39.82	10.53	68.2	-17.85	115	139	Peak
5720	96.84	85.92	10.92			115	139	Average
5720	103.73	92.81	10.92			115	139	Peak
11440	47.82	31.53	16.29	54	-6.18	165	199	Average
11440	56.94	40.65	16.29	74	-17.06	165	199	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5459.12	41.82	31.31	10.51	54	-12.18	202	288	Average
5459.12	52.1	41.59	10.51	74	-21.9	202	288	Peak
*5469.52	53.42	42.89	10.53	68.2	-14.78	202	288	Peak
5720	94.66	83.74	10.92			202	288	Average
5720	101.79	90.87	10.92			202	288	Peak
11440	47.86	31.57	16.29	54	-6.14	167	78	Average
11440	57.16	40.87	16.29	74	-16.84	167	78	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5720 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	95.9	85.02	10.88			253	304	Average
5745	103.07	92.19	10.88			253	304	Peak
11490	48.99	32.52	16.47	54	-5.01	268	10	Average
11490	57.92	41.45	16.47	74	-16.08	268	10	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5745	95.01	84.13	10.88			259	322	Average
5745	104.23	93.35	10.88			259	322	Peak
11490	48.99	32.52	16.47	54	-5.01	243	261	Average
11490	57.19	40.72	16.47	74	-16.81	243	261	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5562.475	52.86	42.18	10.68	68.2	-15.34	253	304	Peak
5656.45	50.46	39.59	10.87	72.97	-22.51	253	304	Peak
5922.625	48.55	37.44	11.11	69.96	-21.41	253	304	Peak
*5954.125	52.55	41.36	11.19	68.2	-15.65	253	304	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5512.075	52.92	42.32	10.6	68.2	-15.28	259	322	Peak
5654.35	49.98	39.11	10.87	71.42	-21.44	259	322	Peak
5922.1	48.23	37.12	11.11	70.35	-22.12	259	322	Peak
*5990.35	53.13	41.8	11.33	68.2	-15.07	259	322	Peak

Remarks:

1. Emission Level = Read Level + 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	95.04	84.23	10.81			253	304	Average
5785	103.62	92.81	10.81			253	304	Peak
11570	47.72	31.23	16.49	54	-6.28	213	30	Average
11570	55.96	39.47	16.49	74	-18.04	213	30	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5785	95.04	84.23	10.81			259	322	Average
5785	103.71	92.9	10.81			259	322	Peak
11570	47.74	31.25	16.49	54	-6.26	265	142	Average
11570	56.27	39.78	16.49	74	-17.73	265	142	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5649.1	52.39	41.54	10.85	68.2	-15.81	253	304	Peak
5653.825	51.82	40.95	10.87	71.03	-19.21	253	304	Peak
5919.475	51.5	40.41	11.09	72.29	-20.79	253	304	Peak
*5988.25	52.43	41.12	11.31	68.2	-15.77	253	304	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5585.575	51.91	41.18	10.73	68.2	-16.29	259	322	Peak
5656.975	51.78	40.91	10.87	73.36	-21.58	259	322	Peak
5923.675	49.35	38.24	11.11	69.18	-19.83	259	322	Peak
*5999.8	52.27	40.94	11.33	68.2	-15.93	259	322	Peak

Remarks:

1. Emission Level = Read Level + 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	95.1	84.22	10.88			253	304	Average
5825	103.64	92.76	10.88			253	304	Peak
11650	47.04	30.26	16.78	54	-6.96	166	254	Average
11650	56.32	39.54	16.78	74	-17.68	166	254	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5825	96.1	85.22	10.88			181	282	Average
5825	104.38	93.5	10.88			181	282	Peak
11650	47.98	31.2	16.78	54	-6.02	169	157	Average
11650	55.91	39.13	16.78	74	-18.09	169	157	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5602.375	52.4	41.64	10.76	68.2	-15.8	253	304	Peak
5654.875	50.41	39.54	10.87	71.81	-21.4	253	304	Peak
5923.15	50.76	39.65	11.11	69.57	-18.81	253	304	Peak
*5947.3	52.66	41.48	11.18	68.2	-15.54	253	304	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5644.375	53.64	42.81	10.83	68.2	-14.56	181	282	Peak
5655.4	51.81	40.94	10.87	72.2	-20.39	181	282	Peak
5922.625	50.51	39.4	11.11	69.96	-19.45	181	282	Peak
*5946.25	53	41.82	11.18	68.2	-15.2	181	282	Peak

Remarks:

1. Emission Level = Read Level + 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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	52.88	42.83	10.05	54	-1.12	103	134	Average
5150	65.49	55.44	10.05	74	-8.51	103	134	Peak
5190	95.28	85.16	10.12			103	134	Average
5190	102.03	91.91	10.12			103	134	Peak
5451.75	42.26	31.75	10.51	54	-11.74	103	134	Average
5451.75	52.4	41.89	10.51	74	-21.6	103	134	Peak
*10380	55.96	39.86	16.1	68.2	-12.24	188	175	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148.2	43.26	33.21	10.05	54	-10.74	100	307	Average
5148.2	53.87	43.82	10.05	74	-20.13	100	307	Peak
5190	86.47	76.35	10.12			100	307	Average
5190	93.28	83.16	10.12			100	307	Peak
5451.2	42.23	31.72	10.51	54	-11.77	100	307	Average
5451.2	53.45	42.94	10.51	74	-20.55	100	307	Peak
*10380	54.62	38.52	16.1	68.2	-13.58	113	326	Peak

Remarks:

1. Emission Level = Read Level + 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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5135.15	43.73	33.73	10	54	-10.27	103	134	Average
5135.15	54.06	44.06	10	74	-19.94	103	134	Peak
5230	97.57	87.43	10.14			103	134	Average
5230	104.61	94.47	10.14			103	134	Peak
5452.74	42.34	31.83	10.51	54	-11.66	103	134	Average
5452.74	52.82	42.31	10.51	74	-21.18	103	134	Peak
*10460	54.37	38.37	16	68.2	-13.83	134	195	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5120.9	42.25	32.28	9.97	54	-11.75	100	307	Average
5120.9	53.39	43.42	9.97	74	-20.61	100	307	Peak
5230	88.57	78.43	10.14			100	307	Average
5230	95.88	85.74	10.14			100	307	Peak
5422.16	42.23	31.81	10.42	54	-11.77	100	307	Average
5422.16	52.89	42.47	10.42	74	-21.11	100	307	Peak
*10460	56.13	40.13	16	68.2	-12.07	118	275	Peak

Remarks:

1. Emission Level = Read Level + 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 54	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5109.05	43.13	33.17	9.96	54	-10.87	100	135	Average
5109.05	53.69	43.73	9.96	74	-20.31	100	135	Peak
5270	96.43	86.31	10.12			100	135	Average
5270	103.03	92.91	10.12			100	135	Peak
5356.71	42.56	32.33	10.23	54	-11.44	100	135	Average
5356.71	52.47	42.24	10.23	74	-21.53	100	135	Peak
*10540	56.65	40.82	15.83	68.2	-11.55	185	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5123.15	42.25	32.26	9.99	54	-11.75	222	290	Average
5123.15	52.73	42.74	9.99	74	-21.27	222	290	Peak
5270	89.43	79.31	10.12			222	290	Average
5270	96	85.88	10.12			222	290	Peak
5365.4	42.42	32.16	10.26	54	-11.58	222	290	Average
5365.4	52.41	42.15	10.26	74	-21.59	222	290	Peak
*10540	55.31	39.48	15.83	68.2	-12.89	118	345	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5270 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 62	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5128.85	43.15	33.15	10	54	-10.85	100	135	Average
5128.85	53.06	43.06	10	74	-20.94	100	135	Peak
5310	94.76	84.67	10.09			100	135	Average
5310	101.13	91.04	10.09			100	135	Peak
5350	52.67	42.44	10.23	54	-1.33	100	135	Average
5350	61.49	51.26	10.23	74	-12.51	100	135	Peak
10620	47.66	31.78	15.88	54	-6.34	175	204	Average
10620	55.2	39.32	15.88	74	-18.8	175	204	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5139.5	42.27	32.26	10.01	54	-11.73	222	290	Average
5139.5	52.38	42.37	10.01	74	-21.62	222	290	Peak
5310	87.43	77.34	10.09			222	290	Average
5310	94.81	84.72	10.09			222	290	Peak
5351.65	43.87	33.64	10.23	54	-10.13	222	290	Average
5351.65	53.66	43.43	10.23	74	-20.34	222	290	Peak
10620	48.23	32.35	15.88	54	-5.77	175	55	Average
10620	54.87	38.99	15.88	74	-19.13	175	55	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5310 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 102	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.57	37.06	10.51	54	-6.43	115	139	Average
5460	59.69	49.18	10.51	74	-14.31	115	139	Peak
*5469.84	67.02	56.49	10.53	68.2	-1.18	115	139	Peak
5510	94.39	83.79	10.6			115	139	Average
5510	101.86	91.26	10.6			115	139	Peak
*5725.24	51.13	40.21	10.92	68.2	-17.07	115	139	Peak
11020	47.85	31.69	16.16	54	-6.15	132	222	Average
11020	56.26	40.1	16.16	74	-17.74	132	222	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	44.84	34.33	10.51	54	-9.16	202	288	Average
5460	57.2	46.69	10.51	74	-16.8	202	288	Peak
*5469.84	63.82	53.29	10.53	68.2	-4.38	202	288	Peak
5510	92.55	81.95	10.6			202	288	Average
5510	99.03	88.43	10.6			202	288	Peak
*5725.48	51.86	40.94	10.92	68.2	-16.34	202	288	Peak
11020	48.01	31.85	16.16	54	-5.99	137	49	Average
11020	55.12	38.96	16.16	74	-18.88	137	49	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5510 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 110	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5457.04	43.85	33.34	10.51	54	-10.15	115	139	Average
5457.04	53.54	43.03	10.51	74	-20.46	115	139	Peak
*5470	52.36	41.83	10.53	68.2	-15.84	115	139	Peak
5550	95.87	85.19	10.68			115	139	Average
5550	102.71	92.03	10.68			115	139	Peak
*5725.56	51.34	40.42	10.92	68.2	-16.86	115	139	Peak
11100	47.83	31.56	16.27	54	-6.17	152	2	Average
11100	55.66	39.39	16.27	74	-18.34	152	2	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5447.6	42.54	32.05	10.49	54	-11.46	202	288	Average
5447.6	52.95	42.46	10.49	74	-21.05	202	288	Peak
*5469.52	51.25	40.72	10.53	68.2	-16.95	202	288	Peak
5550	93.75	83.07	10.68			202	288	Average
5550	100.14	89.46	10.68			202	288	Peak
*5725.32	52.27	41.35	10.92	68.2	-15.93	202	288	Peak
11100	48.01	31.74	16.27	54	-5.99	175	299	Average
11100	55.27	39	16.27	74	-18.73	175	299	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5550 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 134	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5446	42.6	32.11	10.49	54	-11.4	115	139	Average
5446	53.17	42.68	10.49	74	-20.83	115	139	Peak
*5469.84	50.46	39.93	10.53	68.2	-17.74	115	139	Peak
5670	94.78	83.88	10.9			115	139	Average
5670	101.26	90.36	10.9			115	139	Peak
*5725.56	59.09	48.17	10.92	68.2	-9.11	115	139	Peak
11340	47.97	31.55	16.42	54	-6.03	197	125	Average
11340	57.04	40.62	16.42	74	-16.96	197	125	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5431.92	42.33	31.85	10.48	54	-11.67	202	288	Average
5431.92	53.51	43.03	10.48	74	-20.49	202	288	Peak
*5469.84	50.68	40.15	10.53	68.2	-17.52	202	288	Peak
5670	92.94	82.04	10.9			202	288	Average
5670	99.84	88.94	10.9			202	288	Peak
*5725.96	51.96	41.04	10.92	68.2	-16.24	202	288	Peak
11340	47.86	31.44	16.42	54	-6.14	188	256	Average
11340	57.14	40.72	16.42	74	-16.86	188	256	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5670 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 142	**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**	Charles Hsiao

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458	42.33	31.82	10.51	54	-11.67	115	139	Average
5458	52.6	42.09	10.51	74	-21.4	115	139	Peak
*5469.68	51.68	41.15	10.53	68.2	-16.52	115	139	Peak
5710	94.91	84	10.91			115	139	Average
5710	101.26	90.35	10.91			115	139	Peak
11420	48.26	32	16.26	54	-5.74	162	30	Average
11420	57.26	41	16.26	74	-16.74	162	30	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5429.2	42.55	32.08	10.47	54	-11.45	202	288	Average
5429.2	53.01	42.54	10.47	74	-20.99	202	288	Peak
*5470	51.69	41.16	10.53	68.2	-16.51	202	288	Peak
5710	92.79	81.88	10.91			202	288	Average
5710	99.15	88.24	10.91			202	288	Peak
11420	48.15	31.89	16.26	54	-5.85	185	357	Average
11420	56.53	40.27	16.26	74	-17.47	185	357	Peak

Remarks:

1. Emission Level = Read Level + Factor
   Margin value = Emission level – Limit value
2. 5710 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	92.91	82.01	10.9			253	304	Average
5755	100.06	89.16	10.9			253	304	Peak
11510	48.75	32.24	16.51	54	-5.25	167	154	Average
11510	56.75	40.24	16.51	74	-17.25	167	154	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5755	93.36	82.46	10.9			253	304	Average
5755	101.75	90.85	10.9			253	304	Peak
11510	47.76	31.25	16.51	54	-6.24	142	167	Average
11510	56.43	39.92	16.51	74	-17.57	142	167	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5584.525	52.86	42.13	10.73	68.2	-15.34	253	304	Peak
5654.35	51.31	40.44	10.87	71.42	-20.11	253	304	Peak
5921.575	51.68	40.57	11.11	70.73	-19.05	253	304	Peak
*5982.475	53.29	42.03	11.26	68.2	-14.91	253	304	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5602.375	52.85	42.09	10.76	68.2	-15.35	253	304	Peak
5655.4	50.09	39.22	10.87	72.2	-22.11	253	304	Peak
5923.675	49.39	38.28	11.11	69.18	-19.79	253	304	Peak
*5965.15	52.23	41	11.23	68.2	-15.97	253	304	Peak

Remarks:

1. Emission Level = Read Level + 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**	Harry Hsueh

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	92.95	82.13	10.82			255	173	Average
5795	100.6	89.78	10.82			255	173	Peak
11590	47.75	31.24	16.51	54	-6.25	162	198	Average
11590	55.34	38.83	16.51	74	-18.66	162	198	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5795	94.61	83.79	10.82			253	304	Average
5795	101.38	90.56	10.82			253	304	Peak
11590	47.72	31.21	16.51	54	-6.28	105	124	Average
11590	55.54	39.03	16.51	74	-18.46	105	124	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5620.75	52.93	42.14	10.79	68.2	-15.27	255	173	Peak
5653.3	49.33	38.46	10.87	70.64	-21.31	255	173	Peak
5923.15	50.97	39.86	11.11	69.57	-18.6	255	173	Peak
*5999.275	52.7	41.37	11.33	68.2	-15.5	255	173	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
*5556.7	52.35	41.67	10.68	68.2	-15.85	253	304	Peak
5652.25	51.91	41.04	10.87	69.86	-17.95	253	304	Peak
5921.575	51.43	40.32	11.11	70.73	-19.3	253	304	Peak
*5937.85	52.91	41.75	11.16	68.2	-15.29	253	304	Peak

Remarks:

1. Emission Level = Read Level + 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:

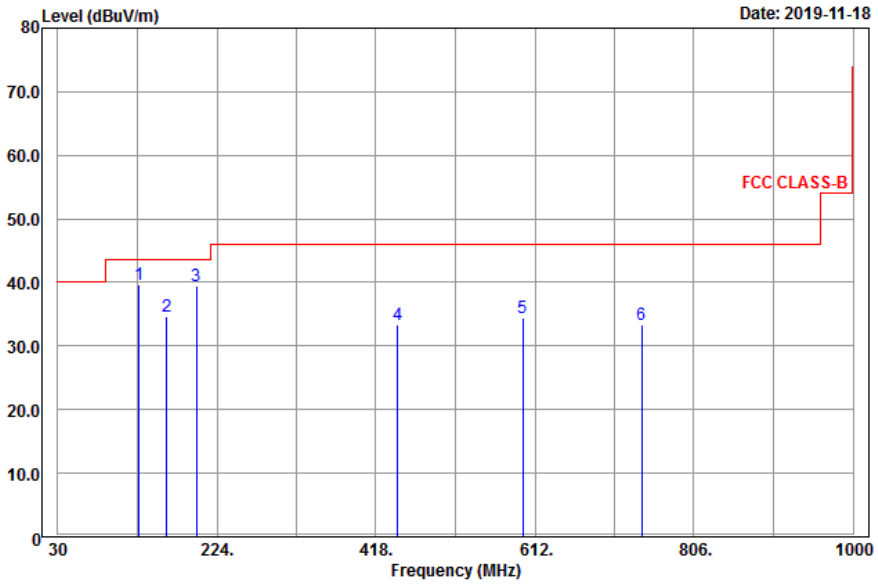
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

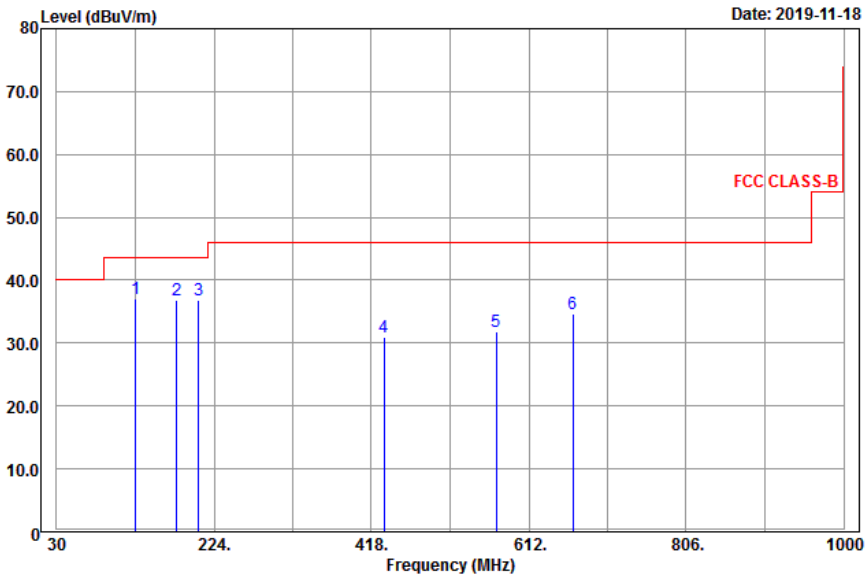
802.11n (HT40)

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

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
128.82	39.58	59.97	-20.39	43.5	-3.92	168	235	Peak
162.57	34.76	55.29	-20.53	43.5	-8.74	170	21	Peak
199.29	39.36	57.61	-18.25	43.5	-4.14	112	156	Peak
444.9	33.31	46.66	-13.35	46	-12.69	189	235	Peak
597.5	34.47	45.1	-10.63	46	-11.53	170	56	Peak
742.4	33.43	41.97	-8.54	46	-12.57	132	125	Peak
Antenna Polarity & Test Distance: Vertical at 3 m								
Frequency (MHz)	**Emission Level (dBuV/m)**	**Read Level (dBuV)**	**Factor (dB/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
127.74	37.02	57.3	-20.28	43.5	-6.48	167	219	Peak
177.69	36.82	56.65	-19.83	43.5	-6.68	130	167	Peak
205.23	36.79	54.97	-18.18	43.5	-6.71	100	225	Peak
433.7	30.93	44.43	-13.5	46	-15.07	176	115	Peak
571.6	31.89	43.01	-11.12	46	-14.11	169	134	Peak
666.8	34.64	44.4	-9.76	46	-11.36	121	180	Peak

Remarks:

1. Emission Level = Read Level + 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	Dec. 10, 2018	Dec. 09, 2019
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 22, 2019	Aug. 21, 2020
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA
DC power supply Keysight	U8002A	MY56330015	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

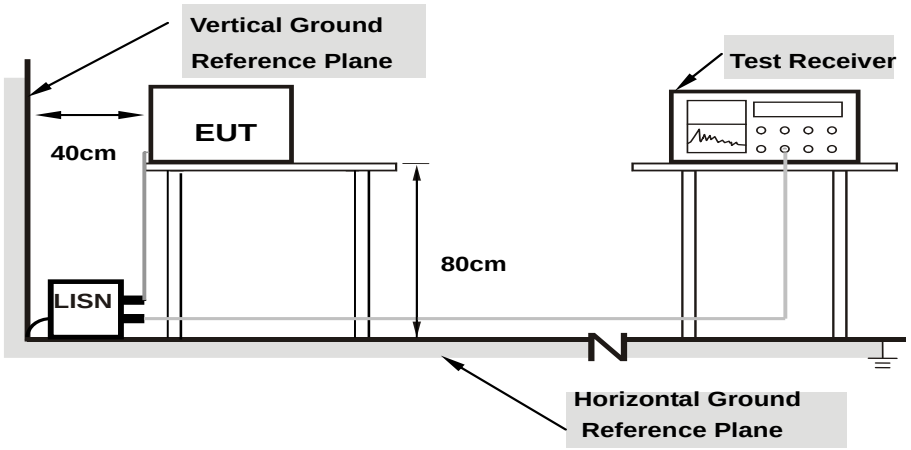
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

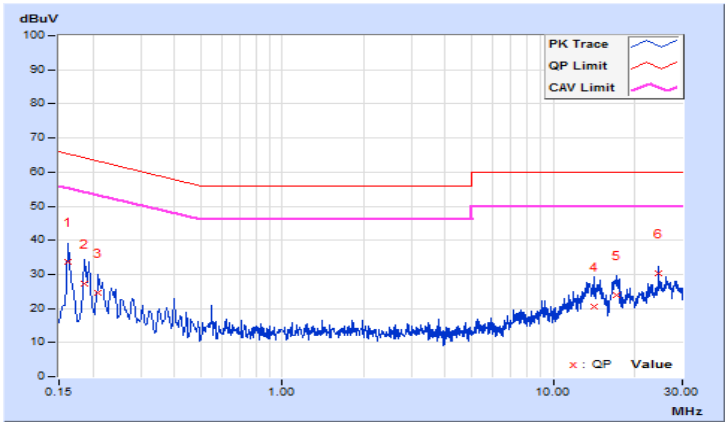
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 75%RH
Tested by	Jones Chang	Test Date	2019/11/24

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	0.16200	9.67	23.95	1.66	33.62	11.33	65.36	55.36	-31.74	-44.03
2	0.18600	9.66	17.73	1.62	27.39	11.28	64.21	54.21	-36.82	-42.93
3	0.21000	9.66	14.85	1.33	24.51	10.99	63.21	53.21	-38.70	-42.22
4	14.25000	9.96	10.66	3.56	20.62	13.52	60.00	50.00	-39.38	-36.48
5	17.14600	9.97	13.85	5.53	23.82	15.50	60.00	50.00	-36.18	-34.50
6	24.57400	10.01	20.13	17.67	30.14	27.68	60.00	50.00	-29.86	-22.32

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

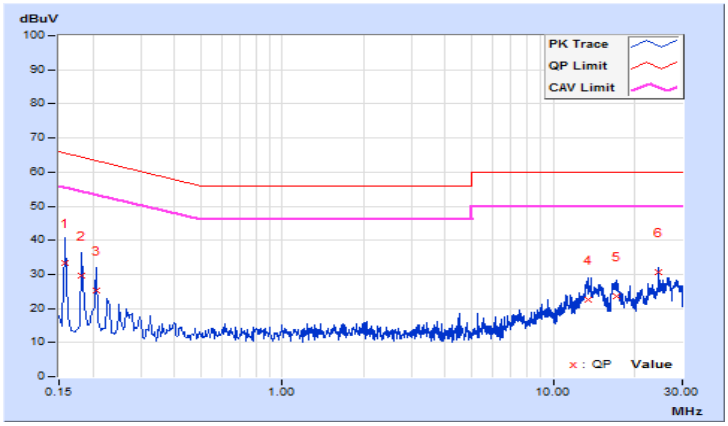


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 75%RH
Tested by	Jones Chang	Test Date	2019/11/24

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	0.15800	9.64	23.82	1.59	33.46	11.23	65.57	55.57	-32.11	-44.34
2	0.18200	9.64	19.91	1.05	29.55	10.69	64.39	54.39	-34.84	-43.70
3	0.20600	9.64	15.73	0.34	25.37	9.98	63.37	53.37	-38.00	-43.39
4	13.47800	9.97	12.43	4.95	22.40	14.92	60.00	50.00	-37.60	-35.08
5	17.07000	10.01	13.70	5.35	23.71	15.36	60.00	50.00	-36.29	-34.64
6	**24.57800**	**10.09**	**20.47**	**17.81**	**30.56**	**27.90**	**60.00**	**50.00**	**-29.44**	**-22.10**

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

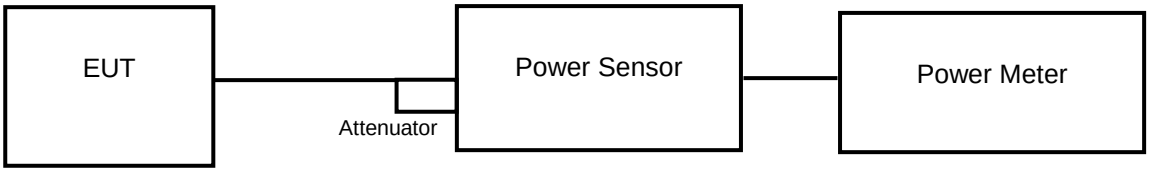
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20 MHz channel widths with $N_{ANT} \geq 5$.

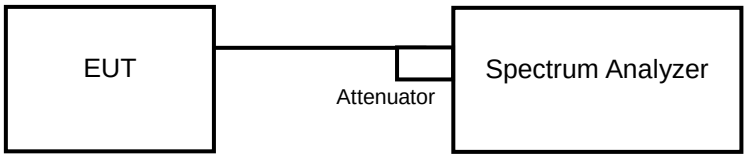
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

<Power Output Measurement>



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

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

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

<802.11ac (VHT80)>

a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99 % occupied bandwidth) of the signal.
b. Set sweep trigger to “free run”.
c. Set RBW = 1 MHz.
d. Set VBW ≥ 3 MHz
e. Number of points in sweep ≥ 2 Span / RBW.
f. Sweep time ≤ (number of points in sweep) * T
g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
h. Detector = RMS.
i. Trace mode = max hold.
j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

26 dB Bandwidth

a. Set RBW = approximately 1 % of the emission bandwidth.
b. Set the VBW > RBW.
c. Detector = Peak.
d. Trace mode = max hold.
e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	13.81	13.71	47.54	16.77	24	Pass
40	5200	13.85	13.68	47.601	16.78	24	Pass
48	5240	13.86	13.76	48.09	16.82	24	Pass
52	5260	13.84	13.76	47.978	16.81	24	Pass
60	5300	13.79	13.63	47	16.72	24	Pass
64	5320	13.94	13.78	48.652	16.87	24	Pass
100	5500	13.75	13.59	46.57	16.68	24	Pass
116	5580	13.91	13.85	48.87	16.89	24	Pass
140	5700	14.26	13.26	47.853	16.80	24	Pass
144	5720 (U-NII-2C)	12.74	12.06	34.862	15.42	23.97	Pass
144	5720 (U-NII-3)	8.69	7.14	12.572	10.99	30	Pass
149	5745	13.73	13.68	46.94	16.72	30	Pass
157	5785	13.85	13.75	47.98	16.81	30	Pass
165	5825	13.75	13.69	47.102	16.73	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (24.91) = 24.96 dBm > 24 dBm.
2. 11 dBm + 10log (25.02) = 24.98 dBm > 24 dBm.
3. 11 dBm + 10log (25.74) = 25.11 dBm > 24 dBm.
4. 11 dBm + 10log (29.77) = 25.74 dBm > 24 dBm.
5. 11 dBm + 10log (28.03) = 25.48 dBm > 24 dBm.
6. 11 dBm + 10log (27.89) = 25.45 dBm > 24 dBm.
7. 11 dBm + 10log (19.82) = 23.97 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (20.31) = 24.08 dBm > 24 dBm.
2. 11 dBm + 10log (21.44) = 24.31 dBm > 24 dBm.
3. 11 dBm + 10log (20.49) = 24.12 dBm > 24 dBm.
4. 11 dBm + 10log (20.00) = 24.01 dBm > 24 dBm.
5. 11 dBm + 10log (20.05) = 24.02 dBm > 24 dBm.
6. 11 dBm + 10log (20.03) = 24.02 dBm > 24 dBm.
7. 11 dBm + 10log (15.22) = 22.82 dBm < 24 dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	12.94	12.85	38.954	15.91	24	Pass
40	5200	12.93	12.76	38.514	15.86	24	Pass
48	5240	12.81	12.63	37.422	15.73	24	Pass
52	5260	12.75	12.56	36.866	15.67	24	Pass
60	5300	12.87	12.79	38.375	15.84	24	Pass
64	5320	12.83	12.66	37.637	15.76	24	Pass
100	5500	13.19	12.35	38.019	15.80	24	Pass
116	5580	13.24	12.19	37.670	15.76	24	Pass
140	5700	12.77	12.56	36.983	15.68	24	Pass
144	5720 (U-NII-2C)	12.40	12.47	35.038	15.45	23.27	Pass
144	5720 (U-NII-3)	8.73	8.19	14.056	11.48	30	Pass
149	5745	12.72	12.63	37.03	15.69	30	Pass
157	5785	12.81	12.68	37.634	15.76	30	Pass
165	5825	13.51	12.26	39.266	15.94	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (20.46) = 24.11 dBm > 24 dBm.
2. 11 dBm + 10log (20.51) = 24.12 dBm > 24 dBm.
3. 11 dBm + 10log (22.00) = 24.42 dBm > 24 dBm.
4. 11 dBm + 10log (27.95) = 25.46 dBm > 24 dBm.
5. 11 dBm + 10log (26.71) = 25.27 dBm > 24 dBm.
6. 11 dBm + 10log (26.02) = 25.15 dBm > 24 dBm.
7. 11 dBm + 10log (16.88) = 23.27 dBm < 24 dBm.

Chain 1

1. 11 dBm + 10log (20.36) = 24.09 dBm > 24 dBm.
2. 11 dBm + 10log (20.32) = 24.08 dBm > 24 dBm.
3. 11 dBm + 10log (20.36) = 24.09 dBm > 24 dBm.
4. 11 dBm + 10log (20.30) = 24.07 dBm > 24 dBm.
5. 11 dBm + 10log (20.32) = 24.08 dBm > 24 dBm.
6. 11 dBm + 10log (20.28) = 24.07 dBm > 24 dBm.
7. 11 dBm + 10log (15.30) = 22.85 dBm < 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	10.75	10.18	22.308	13.48	24	Pass
46	5230	10.81	10.89	24.324	13.86	24	Pass
54	5270	10.81	10.83	24.156	13.83	24	Pass
62	5310	10.86	10.88	24.436	13.88	24	Pass
102	5510	10.94	10.91	24.748	13.94	24	Pass
110	5550	10.76	10.73	23.742	13.76	24	Pass
134	5670	10.82	9.61	21.219	13.27	24	Pass
142	5710 (U-NII-2C)	9.67	9.03	17.266	12.37	24	Pass
142	5710 (U-NII-3)	4.33	2.17	4.358	6.39	30	Pass
151	5755	10.87	10.76	24.13	13.83	30	Pass
159	5795	10.97	10.74	24.361	13.87	30	Pass

Note:

For U-NII-2A, U-NII-2C Band:

Chain 0

1. 11 dBm + 10log (49.41) = 27.94 dBm > 24 dBm.
2. 11 dBm + 10log (61.95) = 28.92 dBm > 24 dBm.
3. 11 dBm + 10log (69.38) = 29.41 dBm > 24 dBm.
4. 11 dBm + 10log (62.79) = 28.98 dBm > 24 dBm.
5. 11 dBm + 10log (63.15) = 29.00 dBm > 24 dBm.
6. 11 dBm + 10log (49.69) = 27.96 dBm > 24 dBm.

Chain 1

1. 11 dBm + 10log (41.56) = 27.19 dBm > 24 dBm.
2. 11 dBm + 10log (48.92) = 27.89 dBm > 24 dBm.
3. 11 dBm + 10log (64.37) = 29.09 dBm > 24 dBm.
4. 11 dBm + 10log (41.59) = 27.19 dBm > 24 dBm.
5. 11 dBm + 10log (41.65) = 27.20 dBm > 24 dBm.
6. 11 dBm + 10log (35.82) = 26.54 dBm > 24 dBm.

26 dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	24.39	20.06
40	5200	25.58	19.98
48	5240	24.96	20.00
52	5260	24.91	20.31
60	5300	25.02	21.44
64	5320	25.74	20.49
100	5500	29.77	20.00
116	5580	28.03	20.05
140	5700	27.89	20.03
144	5720 (U-NII-2C)	19.82	15.22
144	5720 (U-NII-3)	7.80	4.90

802.11n (HT20)

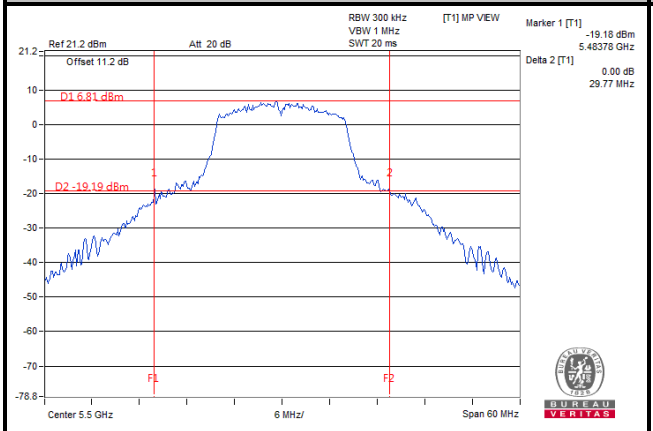
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	20.57	20.31
40	5200	21.23	20.29
48	5240	20.39	20.33
52	5260	20.46	20.36
60	5300	20.51	20.32
64	5320	22.00	20.36
100	5500	27.95	20.30
116	5580	26.71	20.32
140	5700	26.02	20.28
144	5720 (U-NII-2C)	16.88	15.30
144	5720 (U-NII-3)	7.25	5.70

802.11n (HT40)

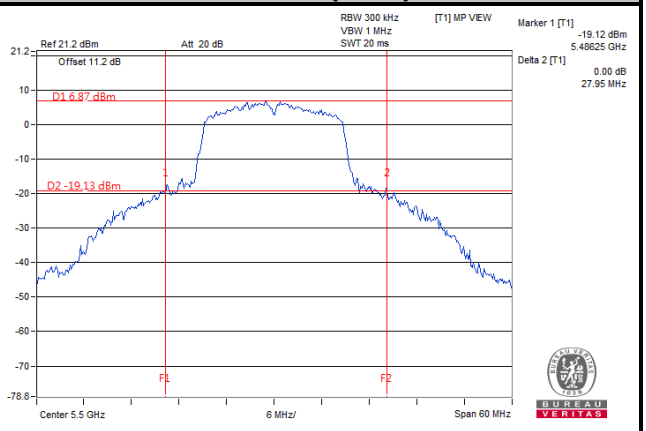
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	50.76	43.15
46	5230	43.81	41.60
54	5270	49.41	41.56
62	5310	61.95	48.92
102	5510	69.38	64.37
110	5550	62.79	41.59
134	5670	63.15	41.65
142	5710 (U-NII-2C)	49.69	35.82
142	5710 (U-NII-3)	13.49	5.60

Spectrum Plot of Worst Value

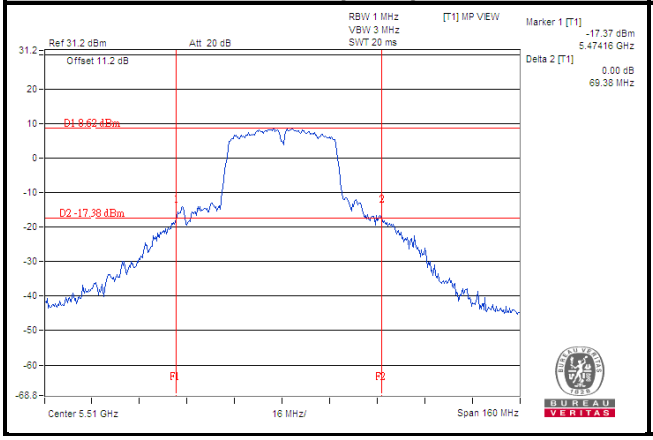
802.11a



802.11n (HT20)



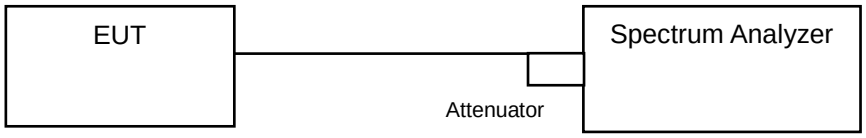
802.11n (HT40)



802.11ac (VHT80)

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	16.92	16.44
40	5200	16.92	16.44
48	5240	16.92	16.44
52	5260	16.92	16.44
60	5300	16.92	16.44
64	5320	16.92	16.56
100	5500	17.16	16.44
116	5580	17.16	16.44
140	5700	17.04	16.44
144	5720 (U-NII-2C)	13.40	13.28
144	5720 (U-NII-3)	3.04	3.04
149	5745	17.10	16.50
157	5785	16.98	16.50
165	5825	16.98	16.44

802.11n (HT20)

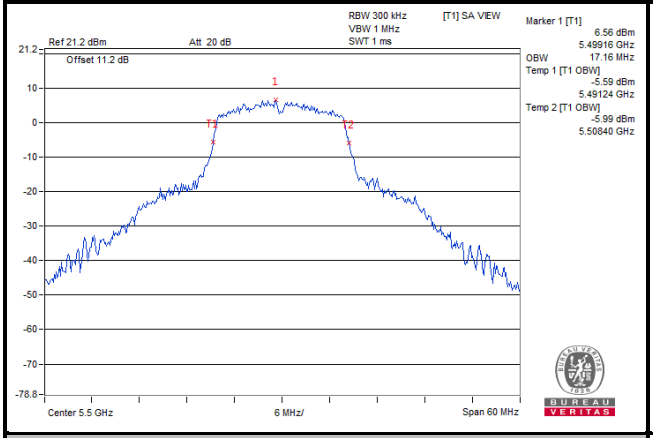
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.76	17.64
40	5200	17.76	17.64
48	5240	17.76	17.64
52	5260	17.64	17.64
60	5300	17.76	17.64
64	5320	17.76	17.64
100	5500	17.88	17.64
116	5580	17.88	17.64
140	5700	17.88	17.64
144	5720 (U-NII-2C)	14.00	13.88
144	5720 (U-NII-3)	3.64	3.64
149	5745	17.70	17.58
157	5785	17.70	17.64
165	5825	17.76	17.64

802.11n (HT40)

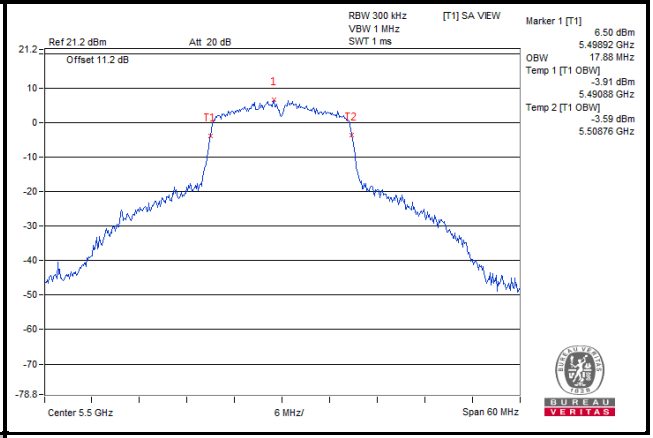
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.48	36.48
46	5230	36.60	36.48
54	5270	36.60	36.48
62	5310	36.60	36.60
102	5510	36.84	36.72
110	5550	36.84	36.48
134	5670	36.84	36.48
142	5710 (U-NII-2C)	33.60	33.48
142	5710 (U-NII-3)	3.24	3.00
151	5755	36.72	36.48
159	5795	36.60	36.48

Spectrum Plot of Worst Value

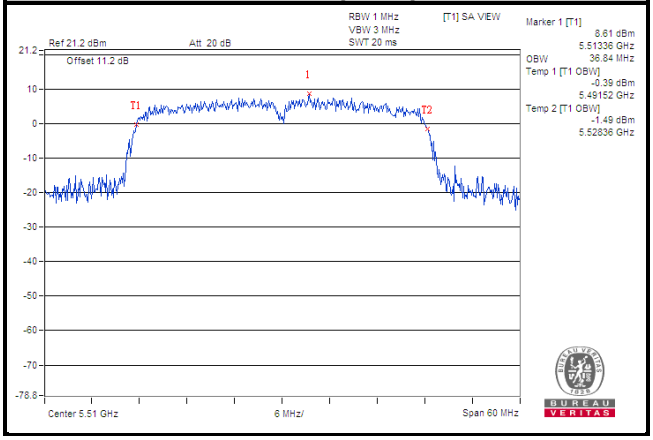
802.11a



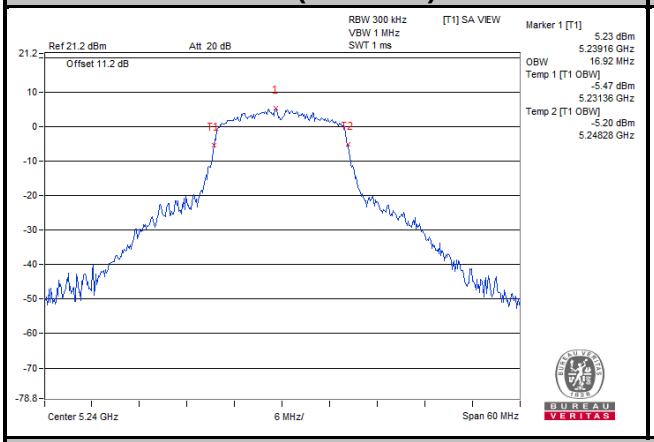
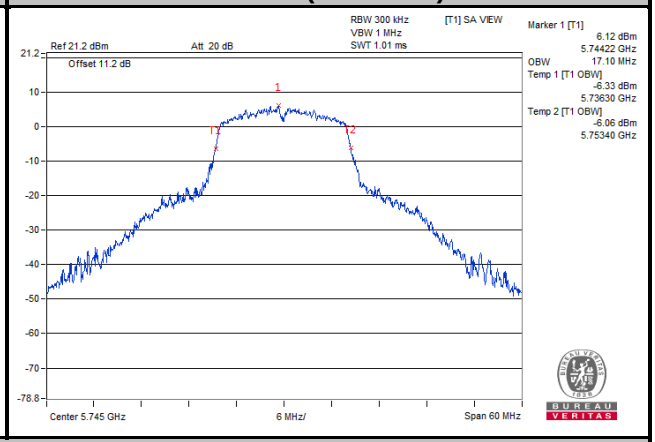
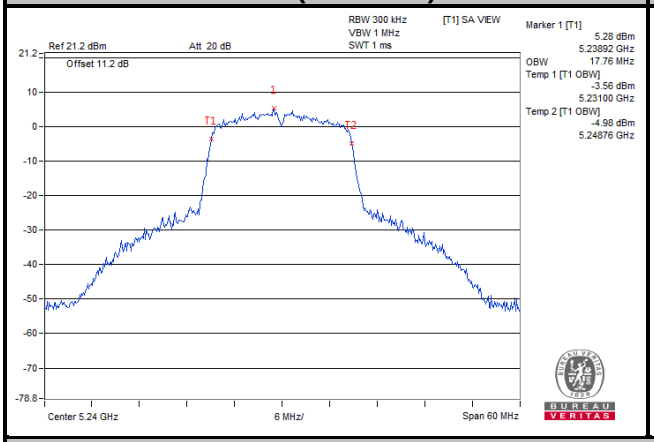
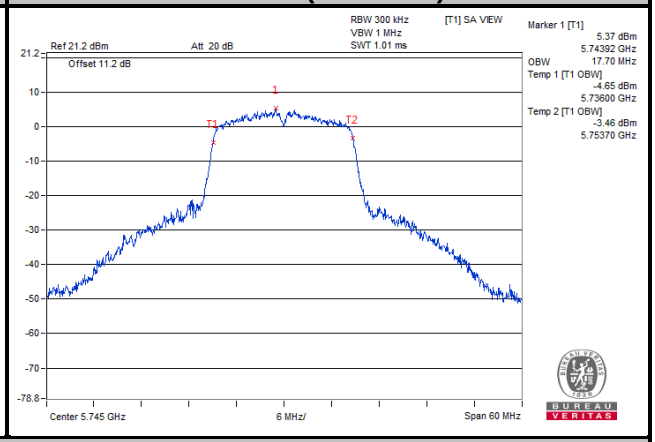
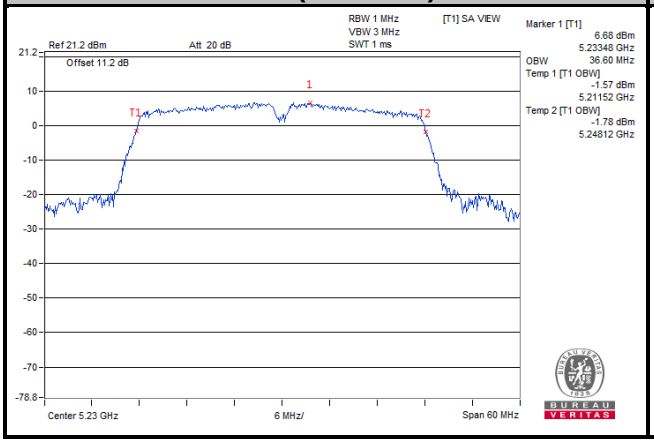
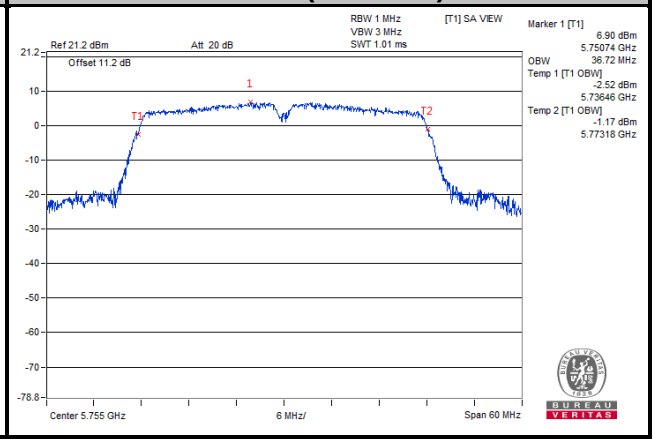
802.11n (HT20)



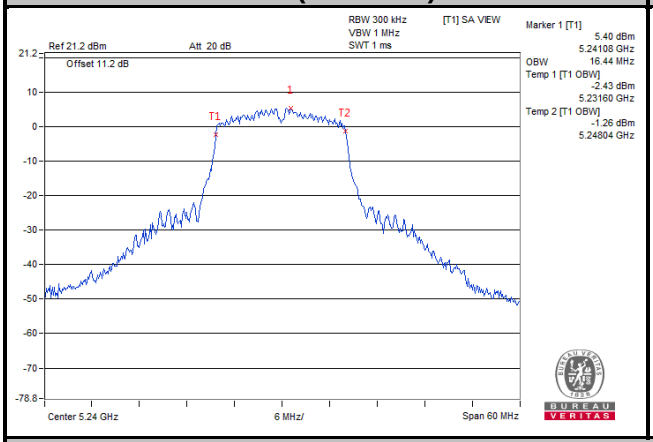
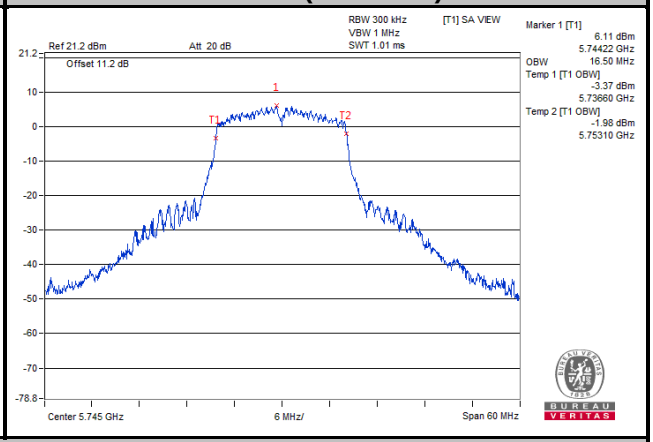
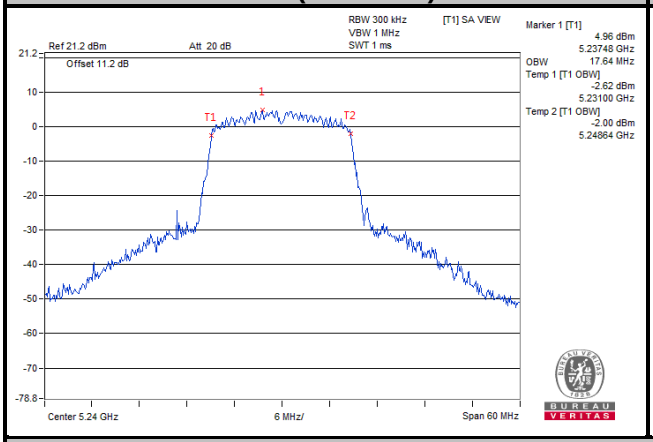
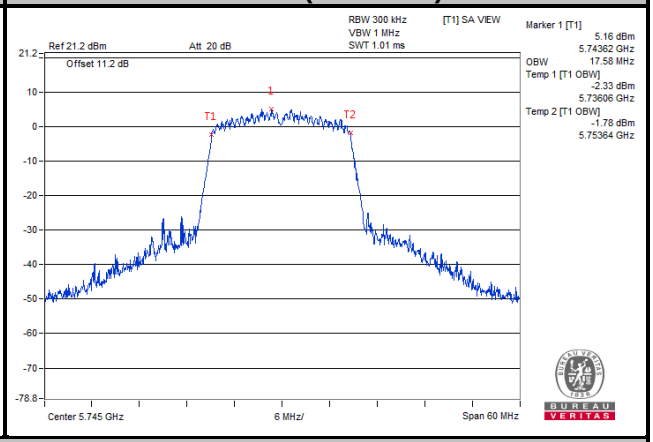
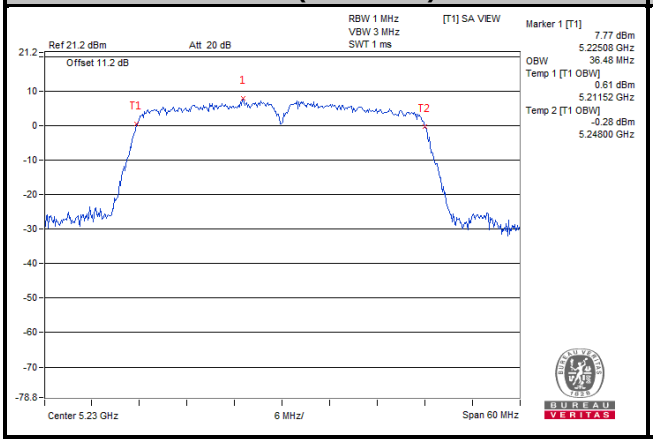
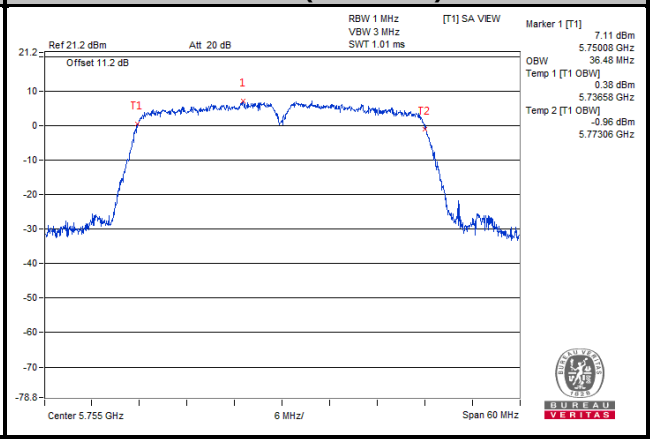
802.11n (HT40)



Chain 0

Spectrum Plot for near by DFS band	
802.11a	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT20)	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT40)	
Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

Chain 1

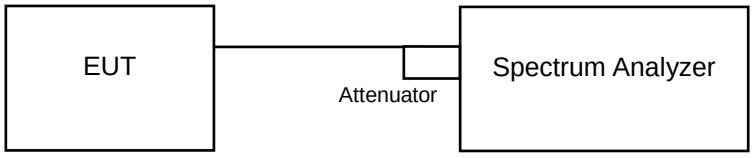
Spectrum Plot for near by DFS band	
802.11a	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT20)	
Ch 48 (5240 MHz)	Ch 149 (5745 MHz)
	
802.11n (HT40)	
Ch 46 (5230 MHz)	Ch 151 (5755 MHz)
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17 dBm/MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11 dBm/MHz
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2 Duty cycle <98%

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to “free run”.
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

※**For U-NII-3:** with duty cycle & Duty cycle <98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz).
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	3.10	2.81	0.11	6.08	11	Pass
40	5200	3.10	2.72	0.11	6.03	11	Pass
48	5240	2.91	2.75	0.11	5.95	11	Pass
52	5260	2.94	3.17	0.11	6.18	11	Pass
60	5300	3.07	3.00	0.11	6.16	11	Pass
64	5320	3.15	2.98	0.11	6.19	11	Pass
100	5500	3.83	2.93	0.11	6.52	11	Pass
116	5580	3.77	3.04	0.11	6.54	11	Pass
140	5700	3.57	2.81	0.11	6.33	11	Pass
144	5720 (U-NII-2C)	3.50	2.74	0.11	6.26	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1, U-NII-2A Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 3.89$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.99$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
36	5180	2.22	1.96	0.28	5.38	11	Pass
40	5200	2.36	2.04	0.28	5.49	11	Pass
48	5240	2.02	1.82	0.28	5.21	11	Pass
52	5260	2.20	1.83	0.28	5.31	11	Pass
60	5300	2.21	1.75	0.28	5.28	11	Pass
64	5320	2.38	1.62	0.28	5.31	11	Pass
100	5500	3.49	2.42	0.28	6.28	11	Pass
116	5580	3.35	2.66	0.28	6.31	11	Pass
140	5700	3.28	2.42	0.28	6.16	11	Pass
144	5720 (U-NII-2C)	3.18	3.26	0.28	6.51	11	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1, U-NII-2A Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 3.89$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.99$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

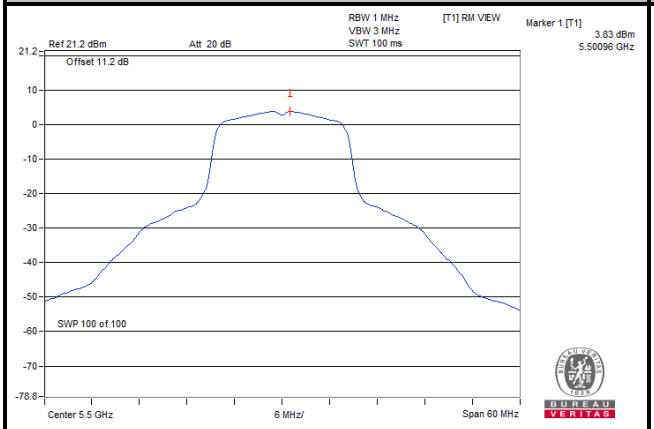
Channel	Frequency (MHz)	PSD (dBm/MHz)		Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1				
38	5190	-3.56	-4.05	0.43	-0.36	11	Pass
46	5230	-1.83	-1.85	0.43	1.60	11	Pass
54	5270	-1.67	-1.86	0.43	1.68	11	Pass
62	5310	-3.10	-3.97	0.43	-0.07	11	Pass
102	5510	-2.38	-2.89	0.43	0.81	11	Pass
110	5550	-1.15	-2.26	0.43	1.77	11	Pass
134	5670	-0.98	-2.26	0.43	1.87	11	Pass
142	5710 (U-NII-2C)	-0.93	-2.09	0.43	1.97	11	Pass

Note:

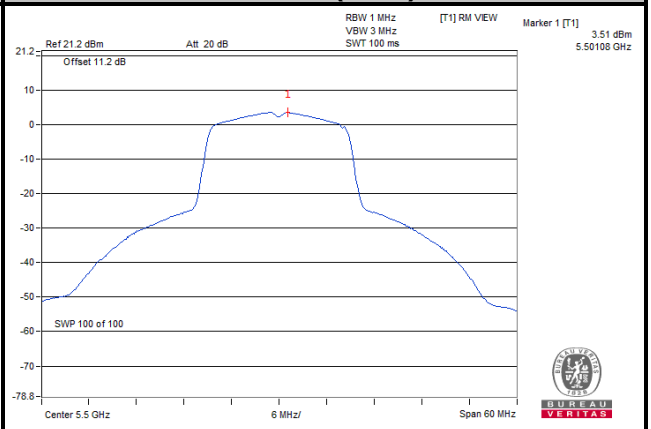
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1, U-NII-2A Band:**
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 3.89$ dBi < 6 dBi, so the limit no need to be reduced.
   For U-NII-2C Band:
   Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \ldots. + 10^{GN/20})^2 / N_{ANT}] = 5.99$ dBi < 6 dBi, so the limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

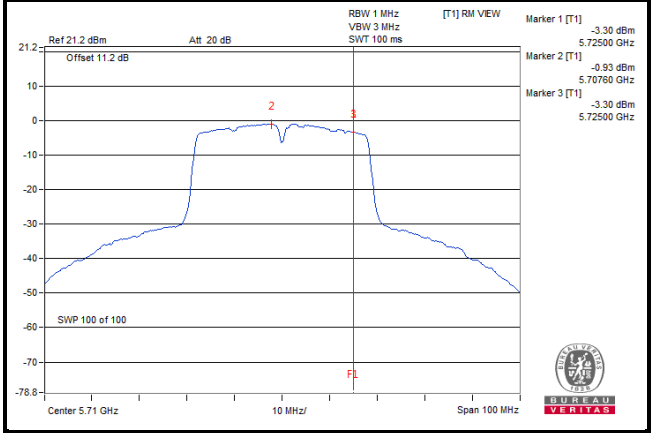
802.11a



802.11n (HT20)



802.11n (HT40)



For U-NII-3 Band

802.11a

TX Chain	Channel	Frequency (MHz)	PSD w/o Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	144	5720 (U-NII-3)	-3.82	-1.60	3.01	0.11	0.58	30	Pass
	149	5745	-1.41	0.81	3.01	0.11	0.58	30	Pass
	157	5785	-1.70	0.52	3.01	0.11	0.77	30	Pass
	165	5825	-1.54	0.68	3.01	0.11	1.02	30	Pass
1	144	5720 (U-NII-3)	-4.51	-2.29	3.01	0.11	0.58	30	Pass
	149	5745	-1.73	0.49	3.01	0.11	0.58	30	Pass
	157	5785	-1.77	0.45	3.01	0.11	0.46	30	Pass
	165	5825	-2.04	0.18	3.01	0.11	0.54	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 5.17 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	144	5720 (U-NII-3)	-3.97	-1.75	3.01	0.28	1.54	30	Pass
	149	5745	-2.78	-0.56	3.01	0.28	2.73	30	Pass
	157	5785	-2.99	-0.77	3.01	0.28	2.52	30	Pass
	165	5825	-2.41	-0.19	3.01	0.28	3.10	30	Pass
1	144	5720 (U-NII-3)	-3.92	-1.70	3.01	0.28	1.59	30	Pass
	149	5745	-3.24	-1.02	3.01	0.28	2.27	30	Pass
	157	5785	-3.31	-1.09	3.01	0.28	2.20	30	Pass
	165	5825	-3.45	-1.23	3.01	0.28	2.06	30	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 5.17 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

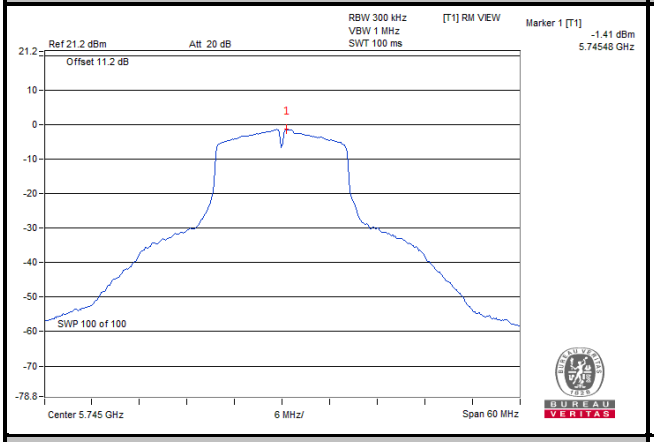
TX Chain	Channel	Frequency (MHz)	PSD		10 log (N=2) dB	Duty Factor (dB)	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
			(dBm/300 kHz)	(dBm/500 kHz)					
0	142	5710 (U-NII-3)	-8.22	-6.00	3.01	0.43	-2.56	30	Pass
	151	5755	-6.68	-4.46	3.01	0.43	-1.02	30	Pass
	159	5795	-6.87	-4.65	3.01	0.43	-1.21	30	Pass
1	142	5710 (U-NII-3)	-9.45	-7.23	3.01	0.43	-3.79	30	Pass
	151	5755	-6.85	-4.63	3.01	0.43	-1.19	30	Pass
	159	5795	-6.69	-4.47	3.01	0.43	-1.03	30	Pass

Note:

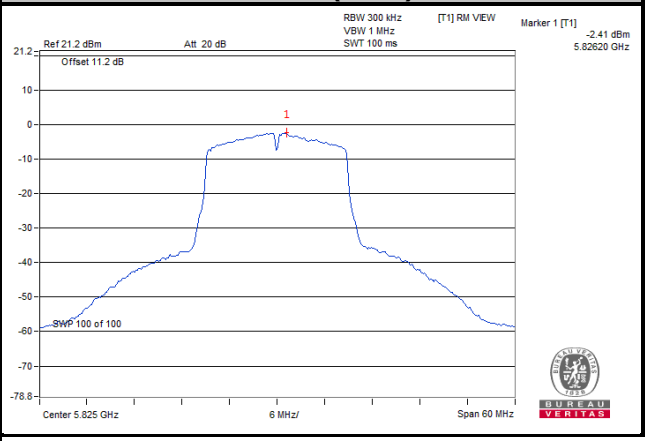
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2 / N_{ANT}$]= 5.17 < 6 dBi, so the limit does not need to reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

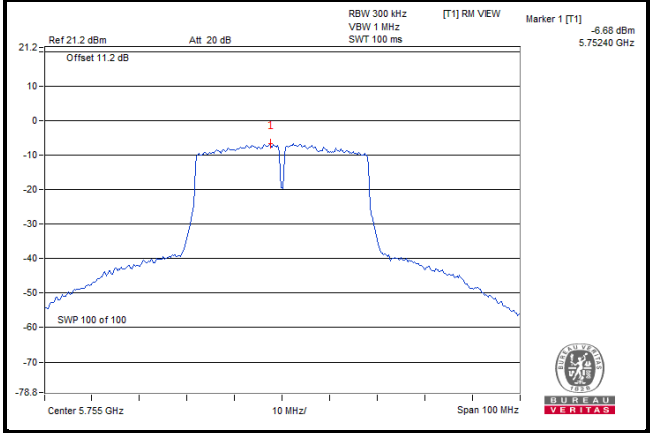
802.11a



802.11n (HT20)



802.11n (HT40)

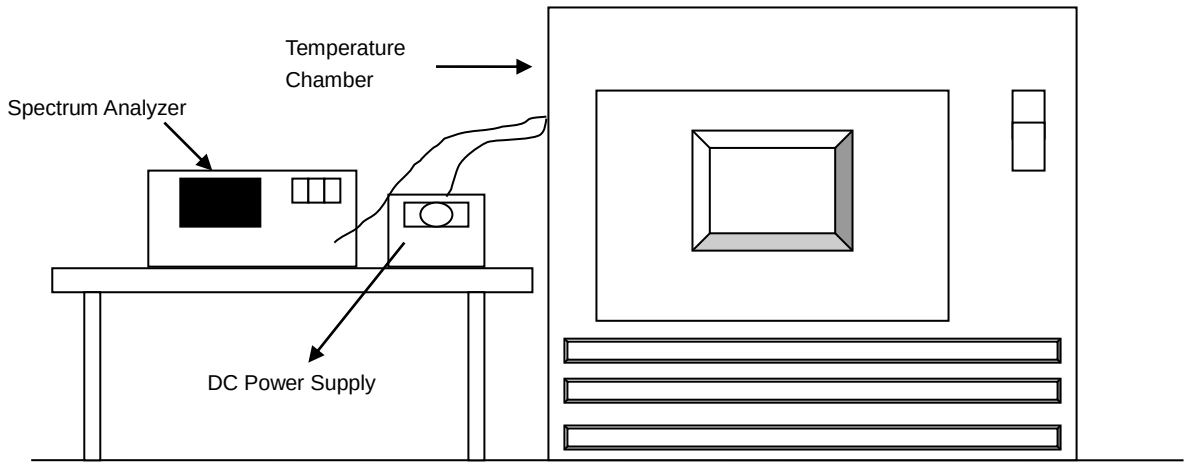


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
60	5	5180.0186	PASS	5180.0178	PASS	5180.0172	PASS	5180.0162	PASS
50	5	5179.9907	PASS	5179.9884	PASS	5179.9934	PASS	5179.9894	PASS
40	5	5179.995	PASS	5179.9917	PASS	5179.9932	PASS	5179.9947	PASS
30	5	5180.0183	PASS	5180.0191	PASS	5180.0179	PASS	5180.0145	PASS
20	5	5180.0122	PASS	5180.0114	PASS	5180.0135	PASS	5180.0114	PASS
10	5	5179.9738	PASS	5179.9766	PASS	5179.9734	PASS	5179.9723	PASS
0	5	5179.9774	PASS	5179.9811	PASS	5179.979	PASS	5179.9797	PASS

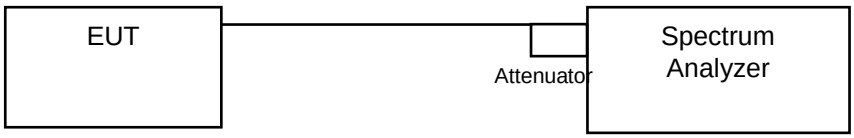
Frequency Stability Versus Voltage									
Operating Frequency: 5180 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	5.75	5180.013	PASS	5180.0117	PASS	5180.0142	PASS	5180.0121	PASS
	5	5180.0122	PASS	5180.0114	PASS	5180.0135	PASS	5180.0114	PASS
	4.25	5180.013	PASS	5180.0111	PASS	5180.0128	PASS	5180.0124	PASS

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

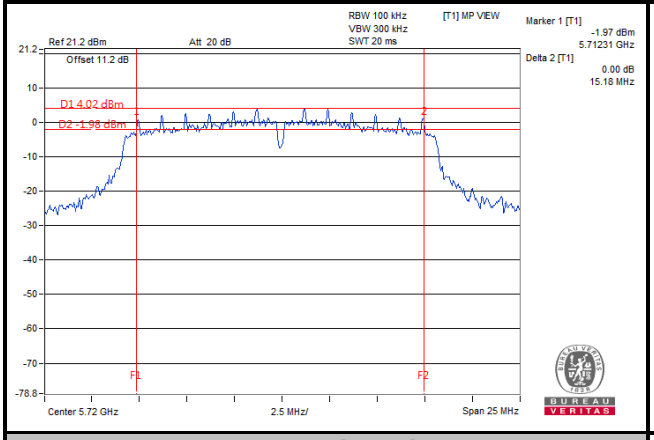
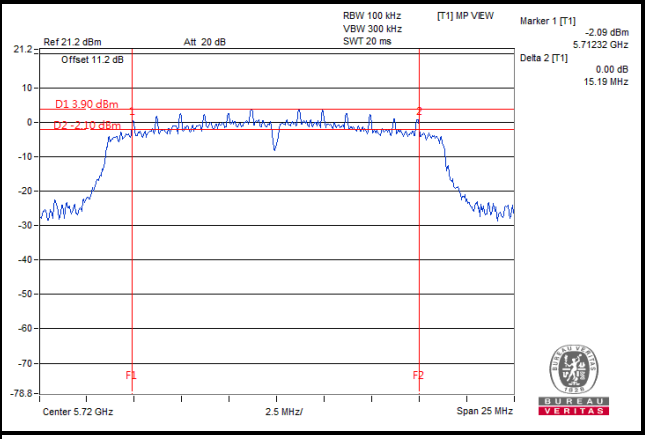
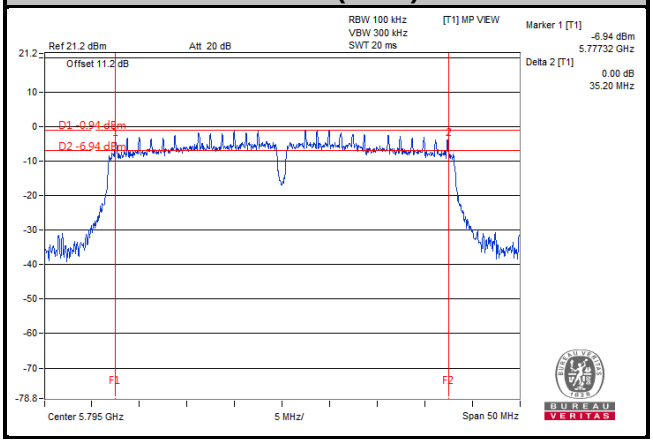
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	2.49	2.50	0.5	Pass
149	5745	15.14	15.14	0.5	Pass
157	5785	15.15	15.15	0.5	Pass
165	5825	15.15	15.13	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
144	5720 (U-NII-3)	2.51	3.05	0.5	Pass
149	5745	15.15	15.15	0.5	Pass
157	5785	15.15	15.15	0.5	Pass
165	5825	15.14	15.15	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
142	5710 (U-NII-3)	2.55	2.55	0.5	Pass
151	5755	35.20	35.20	0.5	Pass
159	5795	35.20	35.19	0.5	Pass

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	
	

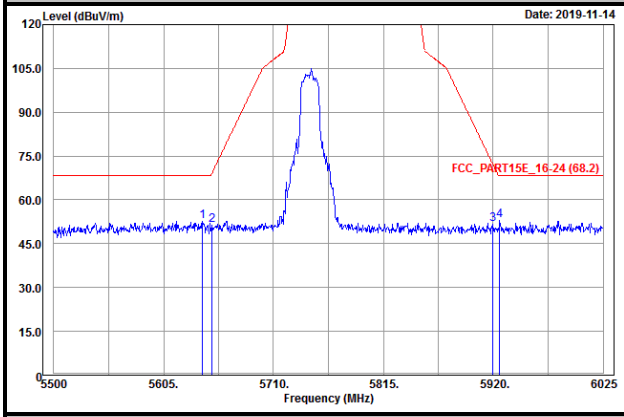
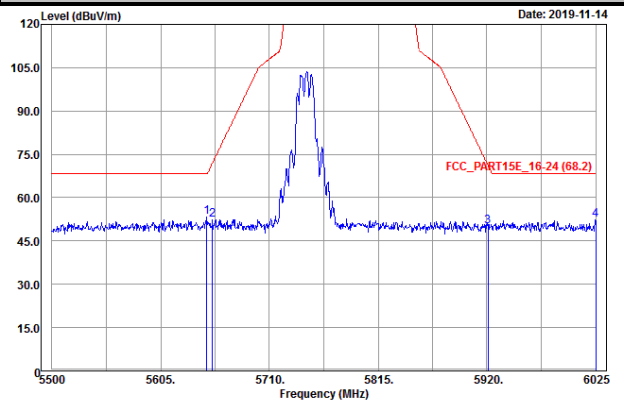
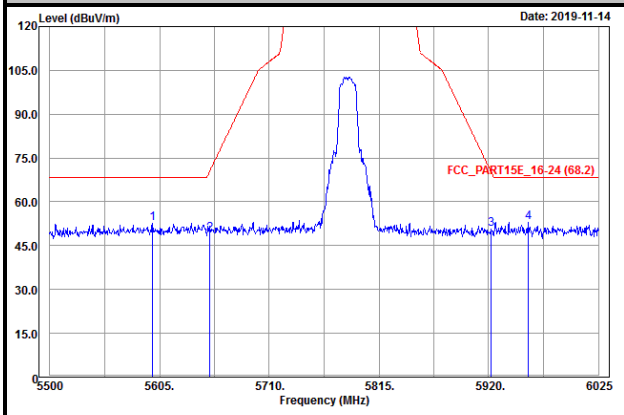
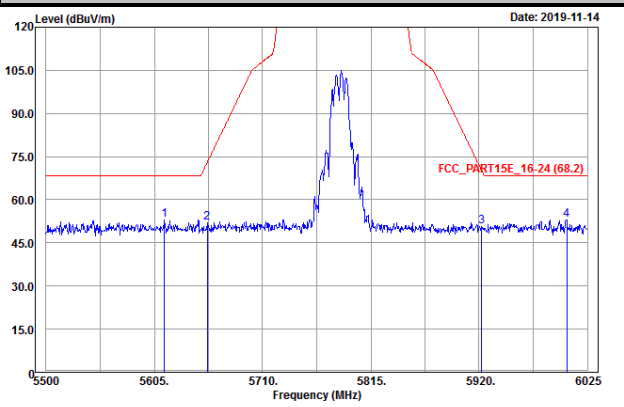
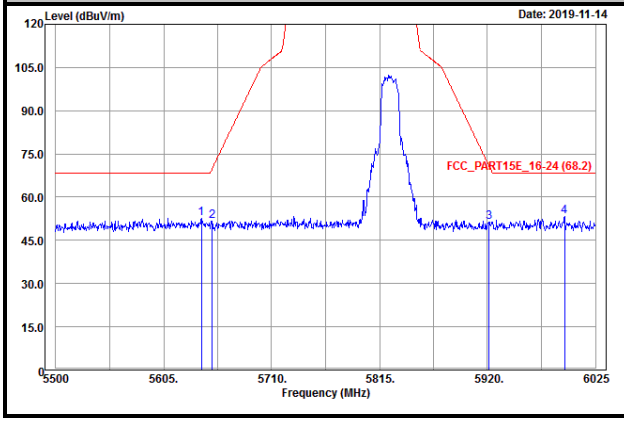
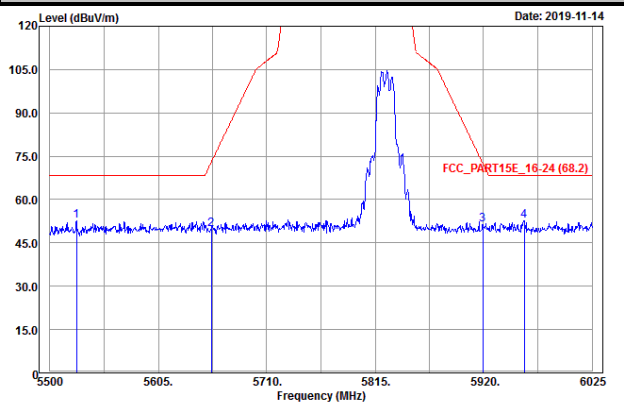
Note:
For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

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

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

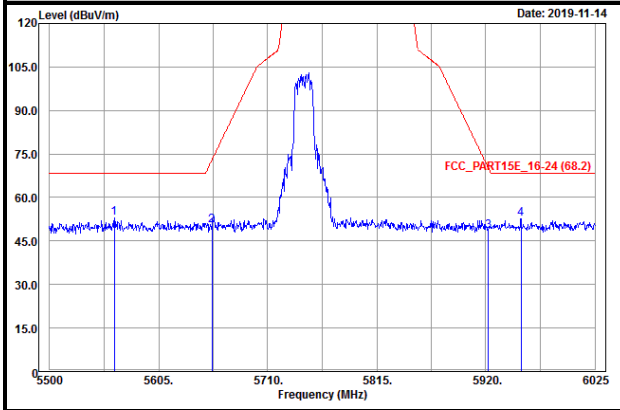
802.11a

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

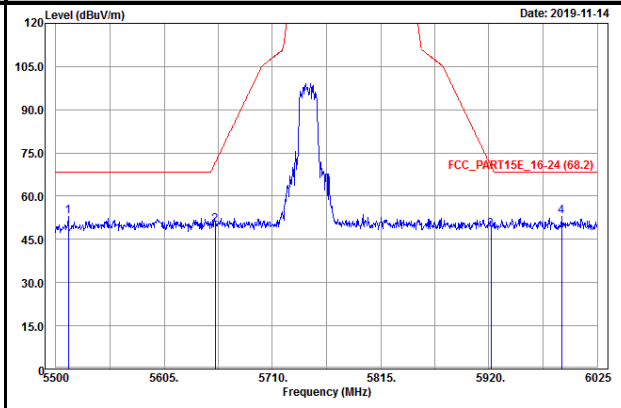
802.11n (HT20)

Ch 149

Horizontal

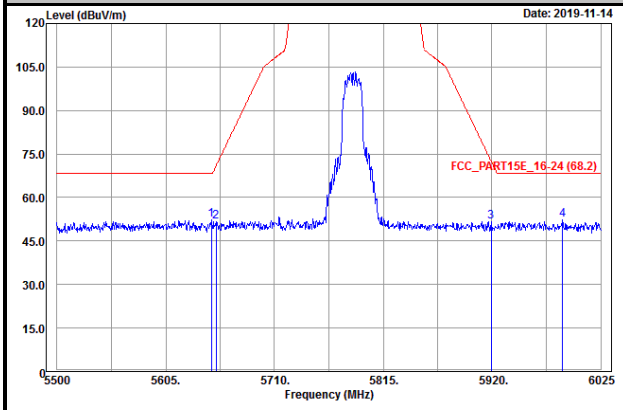


Vertical

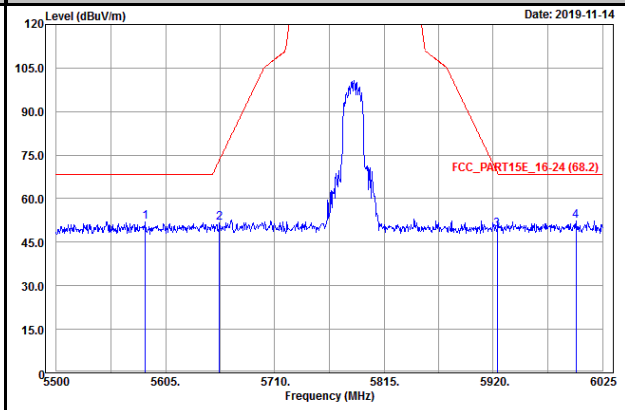


Ch 157

Horizontal

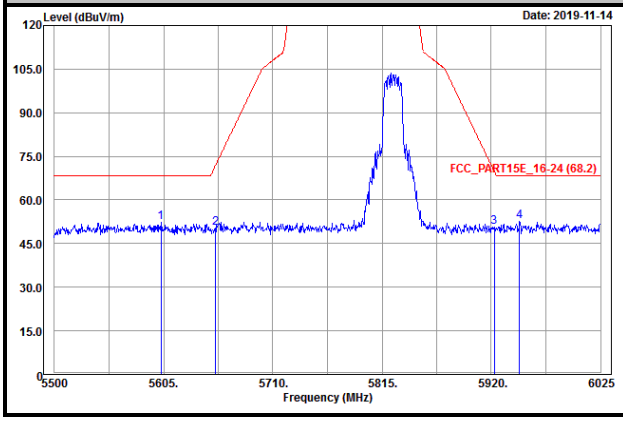


Vertical

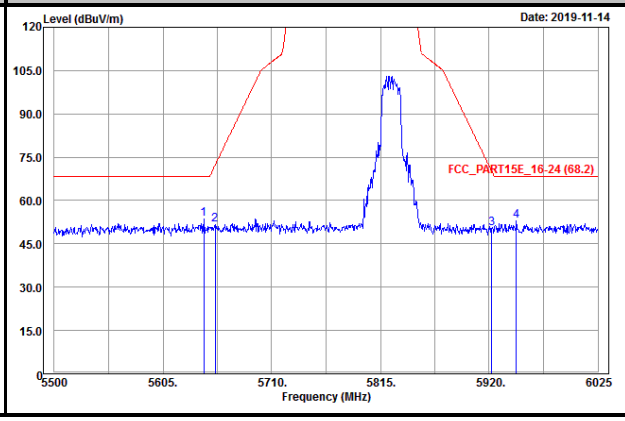


Ch 165

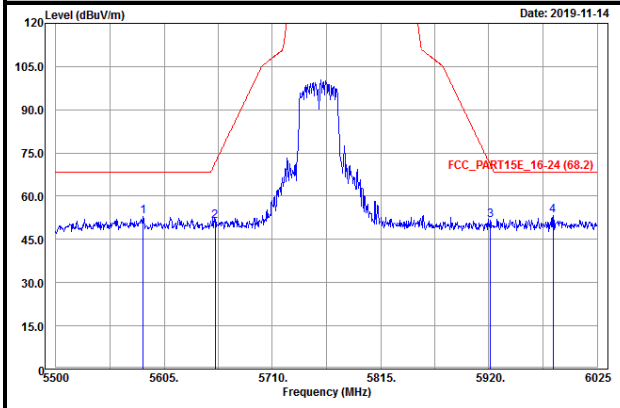
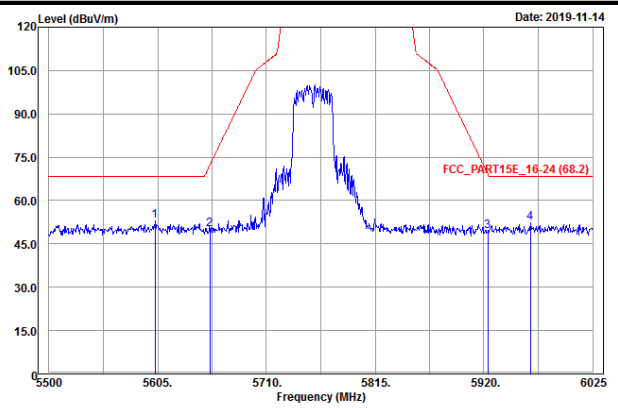
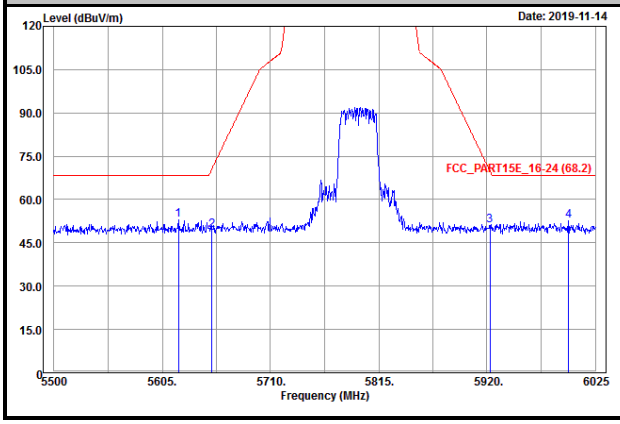
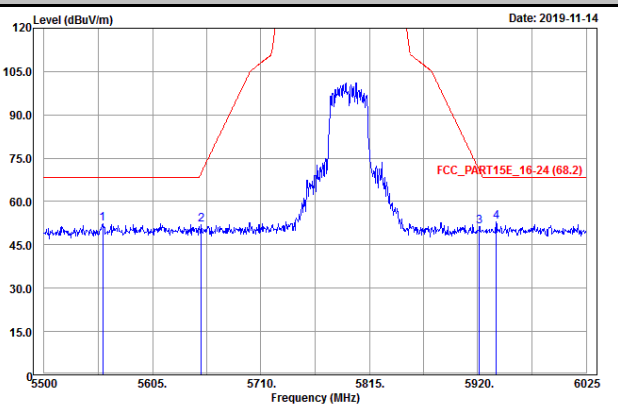
Horizontal



Vertical



802.11n (HT40)

Ch 151	
Horizontal	Vertical
	
Ch 159	
Horizontal	Vertical
	

Appendix – Information of the Testing Laboratories

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

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

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.

--- END ---