

## FCC Test Report

**Report No.:** RF170428C03-3

**FCC ID:** MSQA006

**Test Model:** ASUS\_A006

**Received Date:** Apr. 28, 2017

**Test Date:** May 20, 2017 ~ May 26, 2017

**Issued Date:** Jun. 02, 2017

**Applicant:** ASUSTek COMPUTER INC.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan ( R.O.C )

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**Test Location (2):** No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C



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### Release Control Record

Issue No.	Description	Date Issued
RF170428C03-3	Original Release	Jun. 02, 2017

## 1 Certificate of Conformity

**Product:** ASUS Phone

**Brand:** ASUS

**Test Model:** ASUS\_A006

**Sample Status:** Identical Prototype

**Applicant:** ASUSTek COMPUTER INC.

**Test Date:** May 20, 2017 ~ May 26, 2017

**Standards:** 47 CFR FCC Part 15, Subpart E (Section 15.407)  
ANSI C63.10:2013

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

**Prepared by :**



,

**Date:**

Jun. 02, 2017

Ivonne Wu / Supervisor

**Approved by :**



,

**Date:**

Jun. 02, 2017

David Huang / 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 -22.17 dB at 0.68592 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 -6.85 dB at 10360 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
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.

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

### 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	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

<b>Product</b>	ASUS Phone
<b>Brand</b>	ASUS
<b>Test Model</b>	ASUS_A006
<b>Status of EUT</b>	Identical Prototype
<b>Power Supply Rating</b>	5.0 Vdc (host equipment) 5.0 Vdc or 9 Vdc (adapter) 3.85 Vdc (Li-ion battery)
<b>Modulation Type</b>	256QAM, 64QAM, 16QAM, QPSK, BPSK
<b>Modulation Technology</b>	OFDM
<b>Transfer Rate</b>	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to MCS7 802.11ac: up to V9
<b>Operating Frequency</b>	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
<b>Number of Channel</b>	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5500 ~ 5700 MHz: 12 for 802.11a, 802.11n (HT20) 6 for 802.11n (HT40) 3 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80)
<b>Output Power</b>	16.672 mW for 5180 ~ 5240 MHz 16.827 mW for 5260 ~ 5320 MHz 17.690 mW for 5500 ~ 5700 MHz 17.660 mW for 5745 ~ 5825 MHz
<b>Antenna Type</b>	PIFA antenna with -3.94 dBi gain (5180 ~ 5240 MHz) PIFA antenna with -3.94 dBi gain (5260 ~ 5320 MHz) PIFA antenna with -3.88 dBi gain (5500 ~ 5700 MHz) PIFA antenna with -3.5 dBi gain (5745 ~ 5825 MHz)
<b>Antenna Connector</b>	N/A
<b>Accessory Device</b>	Refer to Note as below
<b>Data Cable Supplied</b>	Refer to Note as below

**Note:**

1. The EUT's accessories list refers to Ext. Pho.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

### 3.2 Description of Test Modes

#### For 5180 ~ 5240 MHz

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

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

2 channels are provided for 802.11n (HT40):

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

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

#### 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

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
58	5290

### 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

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	138	5690
122	5610		

### 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

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5775

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE $\geq$ 1G	RE $<$ 1G	PLC	APCM	
-	√	√	√	√	-

Where **RE $\geq$ 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 **Y-plane**.
2. "-" means no effect.

#### **Radiated Emission Test (Above 1 GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36, 44, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 44, 48	OFDM	BPSK	MCS0
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
-	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	MCS0
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
-	5500-5700	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	MCS0
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

#### **Radiated Emission Test (Below 1 GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	5180-5240	802.11a	36 to 48	36	OFDM	BPSK	6.0
-	5260-5320	802.11n (HT20)	52 to 64	64	OFDM	BPSK	MCS0
-	5500-5700	802.11a	100 to 144	140	OFDM	BPSK	6.0
-	5745-5825	802.11a	149 to 165	149	OFDM	BPSK	6.0

### 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)
-	5180-5320	802.11a	149 to 165	149	OFDM	BPSK	6.0

### 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, 44, 48	OFDM	BPSK	6.0
-		802.11n (HT20)	36 to 48	36, 44, 48	OFDM	BPSK	MCS0
-		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
-	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	MCS0
-		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
-	5500-5700	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	MCS0
-		802.11n (HT40)	102 to 142	102, 110, 134, 142	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	106 to 138	106, 122, 138	OFDM	BPSK	MCS0
-	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	MCS0
-		802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

### Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
RE $<$ 1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang
APCM	25 deg. C, 65 % RH	3.85 Vdc	Anson Lin

### 3.3 Duty Cycle of Test Signal

#### MODULATION TYPE: BPSK

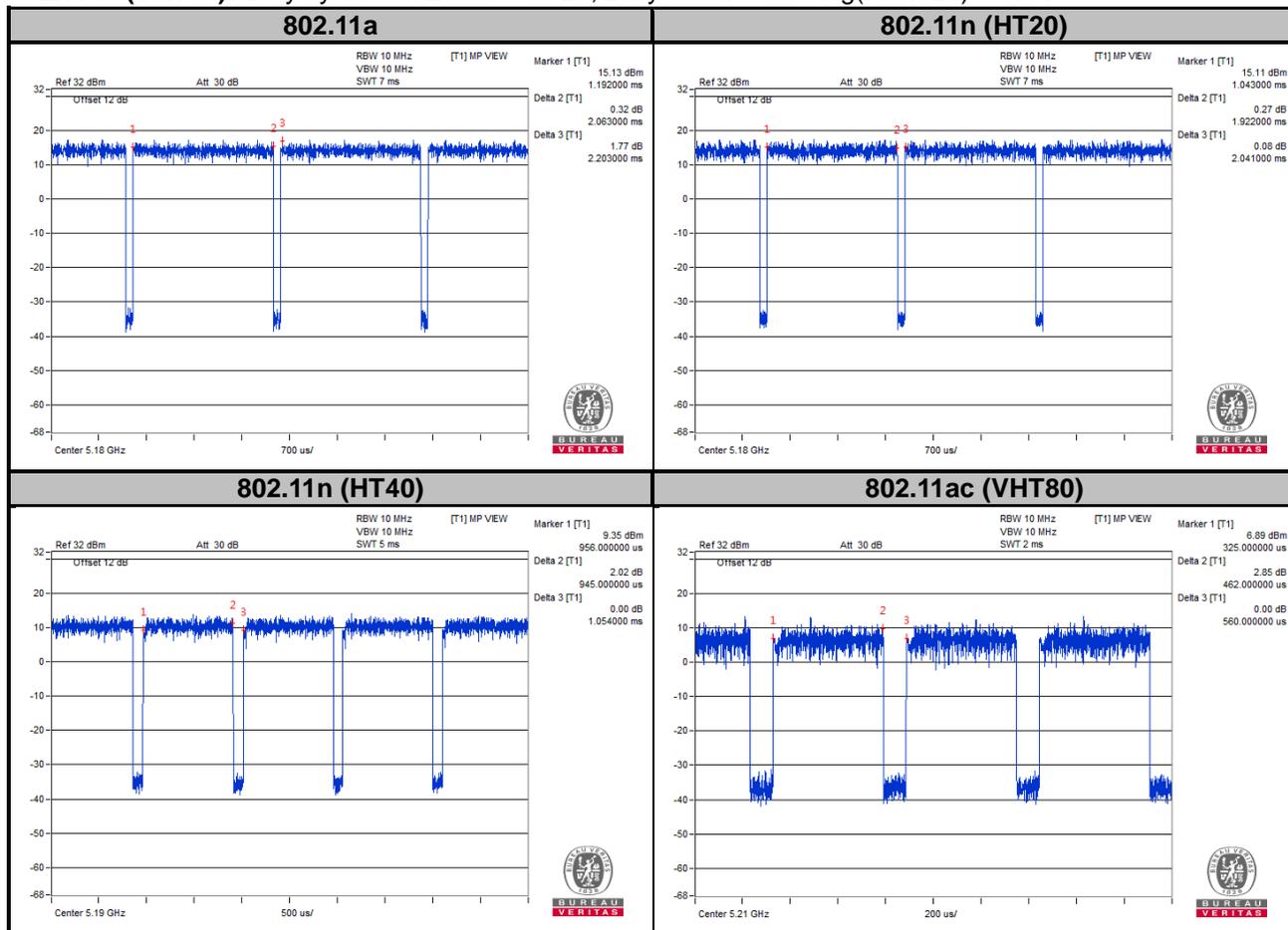
Duty cycle of test signal is < 98 %, duty factor is required.

**802.11a:** Duty cycle =  $2.063/2.203 = 0.936$ , Duty factor =  $10 * \log(1/0.936) = 0.29$

**802.11n (HT20):** Duty cycle =  $1.922/2.041 = 0.942$ , Duty factor =  $10 * \log(1/0.942) = 0.26$

**802.11n (HT40):** Duty cycle =  $945/1054 = 0.897$ , Duty factor =  $10 * \log(1/0.897) = 0.47$

**802.11ac (VHT80):** Duty cycle =  $462/560 = 0.825$ , Duty factor =  $10 * \log(1/0.825) = 0.84$



### 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.

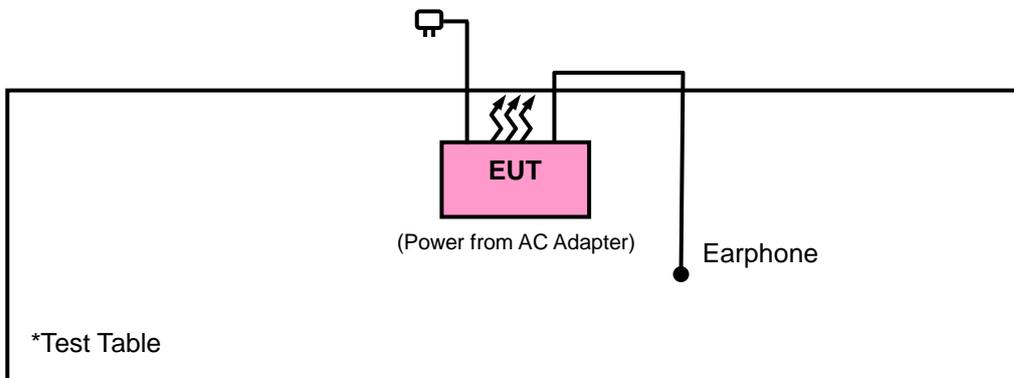
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Earphone	FUNKEY	FK-130102	N/A	N/A

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

Note:

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

#### 3.4.1 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)**

**789033 D02 General UNII Test Procedures New Rules v01r04**

**644545 D01 Guidance for IEEE 802 11ac v01r02**

ANSI C63.10-2013

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

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

## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

#### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

**Note:**

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

4.1.2 Limits of Unwanted Emission Out of the Restricted Bands

Applicable To		Limit	
789033 D02 General UNII Test Procedures New Rules v01r03		Field Strength at 3 m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) <sup>*1</sup> PK:10 (dBm/MHz) <sup>*2</sup> PK:15.6 (dBm/MHz) <sup>*3</sup> PK:27 (dBm/MHz) <sup>*4</sup>	PK: 68.2 (dBµV/m) <sup>*1</sup> PK:105.2 (dBµV/m) <sup>*2</sup> PK: 110.8 (dBµV/m) <sup>*3</sup> PK:122.2 (dBµV/m) <sup>*4</sup>
	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

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

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

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

**Note:**

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

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

## 4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Jun. 21, 2016	Jun. 20, 2017
Spectrum Analyzer ROHDE & SCHWARZ	F5U43	101261	Dec. 13, 2016	Dec. 12, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 16, 2016	Dec. 15, 2017
HORN Antenna ETS-Lindgren	3117	00143293	Dec. 29, 2016	Dec. 28, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 14, 2016	Dec. 13, 2017
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 08, 2016	Jul. 07, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	310N	187226	Jun. 24, 2016	Jun. 23, 2017
Preamplifier Agilent	83017A	MY39501357	Jun. 24, 2016	Jun. 23, 2017
Power Meter Anritsu	ML2495A	1232002	Sep. 08, 2016	Sep. 07, 2017
Power Sensor Anritsu	MA2411B	1207325	Sep. 08, 2016	Sep. 07, 2017
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(R FC-SMS-100-SM S-120+RFC-SMS -100-SMS-400)	Jun. 24, 2016	Jun. 23, 2017
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(R FC-SMS-100-SM S-24)	Jun. 24, 2016	Jun. 23, 2017
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

- Note: 1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The FCC Site Registration No. is 149147.
5. The IC Site Registration No. is IC7450I-1.

#### 4.1.4 Test Procedures

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

**Note:**

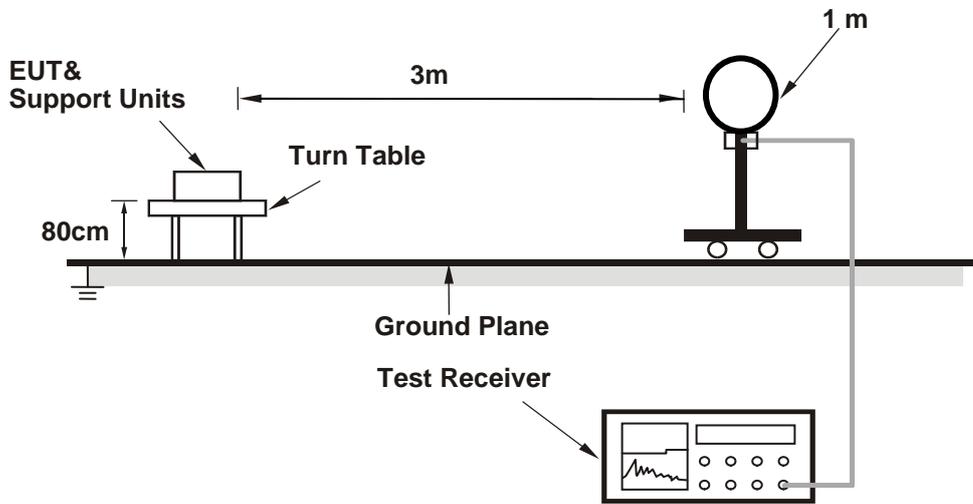
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency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

#### 4.1.5 Deviation from Test Standard

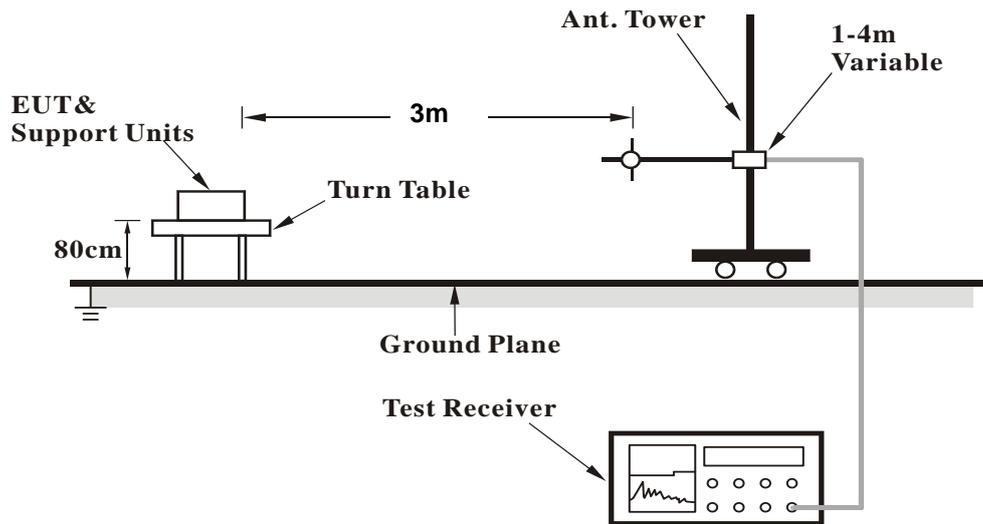
No deviation.

4.1.6 Test Set Up

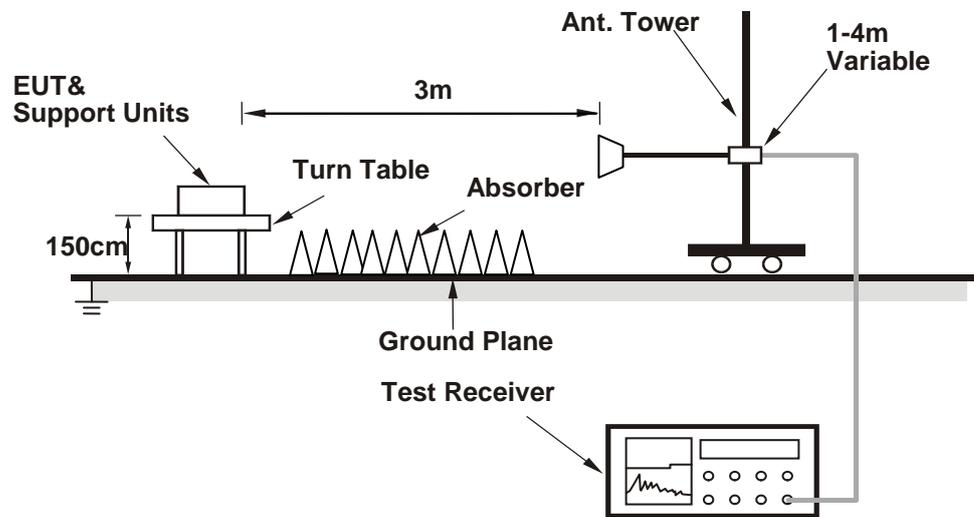
<Radiated emission below 30MHz>



<Frequency Range below 1 GHz>



<Frequency Range above 1 GHz>



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

#### 4.1.7 EUT Operating Conditions

- Placed the EUT on a testing table.
- 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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5132.75	54.18	45.96	74	-19.82	34.11	8.1	33.99	101	241	Peak
5145.8	43.73	35.48	54	-10.27	34.12	8.13	34	101	241	Average
5180	91.97	83.66			34.15	8.16	34	101	241	Average
5180	99.46	91.15			34.15	8.16	34	101	241	Peak
*10360	47.15	32.85	54	-6.85	37.12	12.3	35.12	117	143	Average
*10360	56.06	41.76	74	-17.94	37.12	12.3	35.12	117	143	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5140.55	54.62	46.36	74	-19.38	34.12	8.13	33.99	104	273	Peak
5148.65	44.14	35.89	54	-9.86	34.12	8.13	34	104	273	Average
5180	93.63	85.32			34.15	8.16	34	104	273	Average
5180	101.24	92.93			34.15	8.16	34	104	273	Peak
*10360	46.9	32.6	54	-7.1	37.12	12.3	35.12	127	159	Average
*10360	56.04	41.74	74	-17.96	37.12	12.3	35.12	127	159	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
 Margin value = Emission level – Limit value
- 5180 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 44	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5091.2	53.62	45.45	74	-20.38	34.08	8.07	33.98	101	241	Peak
5125.1	42.84	34.62	54	-11.16	34.11	8.1	33.99	101	241	Average
5220	92.44	84.05			34.17	8.22	34	101	241	Average
5220	99.58	91.19			34.17	8.22	34	101	241	Peak
5368.15	42.83	34.16	54	-11.17	34.29	8.41	34.03	101	241	Average
5435.25	53.19	44.4	74	-20.81	34.35	8.48	34.04	101	241	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5077.4	54.26	46.14	74	-19.74	34.07	8.03	33.98	105	273	Peak
5144.45	42.99	34.74	54	-11.01	34.12	8.13	34	105	273	Average
5220	94.26	85.87			34.17	8.22	34	105	273	Average
5220	101.23	92.84			34.17	8.22	34	105	273	Peak
5432.06	42.73	33.94	54	-11.27	34.35	8.48	34.04	105	273	Average
5452.63	54.04	45.22	74	-19.96	34.36	8.51	34.05	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5220 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5240	91.96	83.52			34.19	8.26	34.01	101	241	Average
5240	99.98	91.54			34.19	8.26	34.01	101	241	Peak
5457.36	53.49	44.67	74	-20.51	34.36	8.51	34.05	101	241	Peak
5459.12	42.94	34.12	54	-11.06	34.36	8.51	34.05	101	241	Average
*10480	47.23	32.72	54	-6.77	37.19	12.53	35.21	196	213	Average
*10480	56.43	41.92	74	-17.57	37.19	12.53	35.21	196	213	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5240	93.63	85.19			34.19	8.26	34.01	105	273	Average
5240	101.56	93.12			34.19	8.26	34.01	105	273	Peak
5370.79	52.95	44.28	74	-21.05	34.29	8.41	34.03	105	273	Peak
5432.83	42.83	34.04	54	-11.17	34.35	8.48	34.04	105	273	Average
*10480	46.83	32.32	54	-7.17	37.19	12.53	35.21	163	195	Average
*10480	55.85	41.34	74	-18.15	37.19	12.53	35.21	163	195	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5240 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5103.05	52.97	44.81	74	-21.03	34.08	8.07	33.99	114	28	Peak
5137.7	42.56	34.31	54	-11.44	34.11	8.13	33.99	114	28	Average
5260	92.44	83.98			34.21	8.26	34.01	114	28	Average
5260	99.62	91.16			34.21	8.26	34.01	114	28	Peak
*10520	46.38	31.79	54	-7.62	37.21	12.61	35.23	146	232	Average
*10520	56.47	41.88	74	-17.53	37.21	12.61	35.23	146	232	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5093.75	53.69	45.53	74	-20.31	34.08	8.07	33.99	296	6	Peak
5112.5	42.68	34.48	54	-11.32	34.09	8.1	33.99	296	6	Average
5260	90.49	82.03			34.21	8.26	34.01	296	6	Average
5260	97.28	88.82			34.21	8.26	34.01	296	6	Peak
*10520	46.71	32.12	54	-7.29	37.21	12.61	35.23	112	213	Average
*10520	55.64	41.05	74	-18.36	37.21	12.61	35.23	112	213	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5260 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5095.55	42.66	34.5	54	-11.34	34.08	8.07	33.99	114	28	Average
5105.3	53.36	45.2	74	-20.64	34.08	8.07	33.99	114	28	Peak
5300	92.36	83.82			34.24	8.32	34.02	114	28	Average
5300	99.24	90.7			34.24	8.32	34.02	114	28	Peak
5350.77	42.95	34.32	54	-11.05	34.28	8.38	34.03	114	28	Average
5376.95	54.43	45.77	74	-19.57	34.29	8.41	34.04	114	28	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5066	53.59	45.49	74	-20.41	34.05	8.03	33.98	296	6	Peak
5105.6	42.4	34.23	54	-11.6	34.09	8.07	33.99	296	6	Average
5300	90.76	82.22			34.24	8.32	34.02	296	6	Average
5300	97.67	89.13			34.24	8.32	34.02	296	6	Peak
5371.12	53.69	45.02	74	-20.31	34.29	8.41	34.03	296	6	Peak
5452.3	42.7	33.88	54	-11.3	34.36	8.51	34.05	296	6	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5300 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	92.55	83.97			34.25	8.35	34.02	114	28	Average
5320	99.72	91.14			34.25	8.35	34.02	114	28	Peak
5352.86	43.42	34.79	54	-10.58	34.28	8.38	34.03	114	28	Average
5418.42	53.8	45.07	74	-20.2	34.33	8.44	34.04	114	28	Peak
10640	46.77	32.04	54	-7.23	37.31	12.71	35.29	147	14	Average
10640	56.17	41.44	74	-17.83	37.31	12.71	35.29	147	14	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	90.59	82.01			34.25	8.35	34.02	296	6	Average
5320	97.36	88.78			34.25	8.35	34.02	296	6	Peak
5351.43	42.96	34.33	54	-11.04	34.28	8.38	34.03	296	6	Average
5401.59	54.19	45.47	74	-19.81	34.32	8.44	34.04	296	6	Peak
10640	46.69	31.96	54	-7.31	37.31	12.71	35.29	159	266	Average
10640	57.13	42.4	74	-16.87	37.31	12.71	35.29	159	266	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5320 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5457.36	44.13	35.31	54	-9.87	34.36	8.51	34.05	100	243	Average
5457.68	55.21	46.39	74	-18.79	34.36	8.51	34.05	100	243	Peak
*5469.68	44.48	35.65	54	-9.52	34.37	8.51	34.05	100	243	Average
*5470.32	54.3	45.47	74	-19.7	34.37	8.51	34.05	100	243	Peak
5500	94.77	85.85			34.4	8.57	34.05	100	243	Average
5500	101.55	92.63			34.4	8.57	34.05	100	243	Peak
11000	47.28	32.2	54	-6.72	37.6	12.96	35.48	198	114	Average
11000	56.51	41.43	74	-17.49	37.6	12.96	35.48	198	114	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.48	54.36	45.54	74	-19.64	34.36	8.51	34.05	105	273	Peak
5460	44.34	35.52	54	-9.66	34.36	8.51	34.05	105	273	Average
*5469.2	44.67	35.84	54	-9.33	34.37	8.51	34.05	105	273	Average
*5469.84	54.31	45.48	74	-19.69	34.37	8.51	34.05	105	273	Peak
5500	95.47	86.55			34.4	8.57	34.05	105	273	Average
5500	102.42	93.5			34.4	8.57	34.05	105	273	Peak
11000	48.13	33.05	54	-5.87	37.6	12.96	35.48	164	326	Average
11000	57.21	42.13	74	-16.79	37.6	12.96	35.48	164	326	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5500 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5400.88	42.75	34.03	54	-11.25	34.32	8.44	34.04	100	243	Average
5419.12	53.15	44.38	74	-20.85	34.33	8.48	34.04	100	243	Peak
*5469.2	42.76	33.93	54	-11.24	34.37	8.51	34.05	100	243	Average
*5470.96	53.18	44.32	74	-20.82	34.37	8.54	34.05	100	243	Peak
5580	94.33	85.34			34.47	8.6	34.08	100	243	Average
5580	101.98	92.99			34.47	8.6	34.08	100	243	Peak
*5725.4	42.81	33.65	54	-11.19	34.62	8.65	34.11	100	243	Average
*5725.48	53.14	43.98	74	-20.86	34.62	8.65	34.11	100	243	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5385.04	54.06	45.38	74	-19.94	34.31	8.41	34.04	105	273	Peak
5459.12	42.82	34	54	-11.18	34.36	8.51	34.05	105	273	Average
*5468.4	53.4	44.57	74	-20.6	34.37	8.51	34.05	105	273	Peak
*5469.36	42.89	34.06	54	-11.11	34.37	8.51	34.05	105	273	Average
5580	95.66	86.67			34.47	8.6	34.08	105	273	Average
5580	102.1	93.11			34.47	8.6	34.08	105	273	Peak
*5724.84	52.53	43.37	74	-21.47	34.62	8.65	34.11	105	273	Peak
*5725.32	42.87	33.71	54	-11.13	34.62	8.65	34.11	105	273	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5580 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5700	95.77	86.64			34.59	8.64	34.1	100	243	Average
5700	102.57	93.44			34.59	8.64	34.1	100	243	Peak
*5724.52	44.93	35.77	54	-9.07	34.62	8.65	34.11	100	243	Average
*5724.92	54.14	44.98	74	-19.86	34.62	8.65	34.11	100	243	Peak
11400	47.85	32.75	54	-6.15	37.84	12.67	35.41	128	234	Average
11400	56.95	41.85	74	-17.05	37.84	12.67	35.41	128	234	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5700	94.49	85.36			34.59	8.64	34.1	105	273	Average
5700	101	91.87			34.59	8.64	34.1	105	273	Peak
*5724.2	44.09	34.93	54	-9.91	34.62	8.65	34.11	105	273	Average
*5724.92	53.98	44.82	74	-20.02	34.62	8.65	34.11	105	273	Peak
11400	48.26	33.16	54	-5.74	37.84	12.67	35.41	138	129	Average
11400	57.38	42.28	74	-16.62	37.84	12.67	35.41	138	129	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5700 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5386.96	54.19	45.51	74	-19.81	34.31	8.41	34.04	134	32	Peak
5442.8	42.91	34.12	54	-11.09	34.35	8.48	34.04	134	32	Average
*5468.72	52.46	43.63	74	-21.54	34.37	8.51	34.05	134	32	Peak
*5470.64	42.77	33.94	54	-11.23	34.37	8.51	34.05	134	32	Average
5720	94.61	85.45			34.62	8.65	34.11	134	32	Average
5720	102.04	92.88			34.62	8.65	34.11	134	32	Peak
5854	57.65	48.33	78.2	-20.55	34.76	8.7	34.14	134	32	Peak
5866	43.43	34.1	54	-10.57	34.76	8.71	34.14	134	32	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5441.52	53.52	44.73	74	-20.48	34.35	8.48	34.04	100	0	Peak
5448.88	42.75	33.92	54	-11.25	34.36	8.51	34.04	100	0	Average
*5468.56	42.62	33.79	54	-11.38	34.37	8.51	34.05	100	0	Average
*5468.72	53.53	44.7	74	-20.47	34.37	8.51	34.05	100	0	Peak
5720	96.54	87.38			34.62	8.65	34.11	104	0	Average
5720	103.55	94.39			34.62	8.65	34.11	104	0	Peak
5854	57.85	48.53	78.2	-20.35	34.76	8.7	34.14	104	0	Peak
5868	43.4	34.07	54	-10.6	34.76	8.71	34.14	104	0	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5720 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 149	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	95.85	86.66			34.64	8.66	34.11	103	244	Average
5745	104.54	95.35			34.64	8.66	34.11	103	244	Peak
11490	47.31	32.19	54	-6.69	37.89	12.62	35.39	157	108	Average
11490	56.03	40.91	74	-17.97	37.89	12.62	35.39	157	108	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	94.78	85.59			34.64	8.66	34.11	100	279	Average
5745	102.94	93.75			34.64	8.66	34.11	100	279	Peak
11490	48.35	33.23	54	-5.65	37.89	12.62	35.39	185	274	Average
11490	57.34	42.22	74	-16.66	37.89	12.62	35.39	185	274	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5619.7	44.54	35.49	54	-9.46	34.52	8.61	34.08	103	244	Average
*5619.7	53.57	44.52	74	-20.43	34.52	8.61	34.08	103	244	Peak
5652.25	52.45	43.36	75.4	-22.95	34.56	8.62	34.09	103	244	Peak
5923.675	51.73	42.33	74.83	-23.1	34.83	8.73	34.16	103	244	Peak
*6006.1	45.23	35.74	54	-8.77	34.9	8.76	34.17	103	244	Average
*6006.1	54.74	45.25	74	-19.26	34.9	8.76	34.17	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5588.2	45.21	36.2	54	-8.79	34.49	8.6	34.08	100	279	Average
*5588.2	54.65	45.64	74	-19.35	34.49	8.6	34.08	100	279	Peak
5654.875	53.04	43.95	77.04	-24	34.56	8.63	34.1	100	279	Peak
5922.625	52.58	43.18	75.48	-22.9	34.83	8.73	34.16	100	279	Peak
*5971.975	44.86	35.41	54	-9.14	34.87	8.75	34.17	100	279	Average
*5971.975	54.09	44.64	74	-19.91	34.87	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5745 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	95.35	86.12			34.68	8.68	34.13	103	244	Average
5785	103.55	94.32			34.68	8.68	34.13	103	244	Peak
11570	47.54	32.23	54	-6.46	38	12.68	35.37	138	127	Average
11570	56.5	41.19	74	-17.5	38	12.68	35.37	138	127	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	94.4	85.17			34.68	8.68	34.13	100	279	Average
5785	102.02	92.79			34.68	8.68	34.13	100	279	Peak
11570	47.14	31.83	54	-6.86	38	12.68	35.37	196	336	Average
11570	55.89	40.58	74	-18.11	38	12.68	35.37	196	336	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5578.225	45.11	36.12	54	-8.89	34.47	8.6	34.08	103	244	Average
*5578.225	54.16	45.17	74	-19.84	34.47	8.6	34.08	103	244	Peak
5654.875	54.01	44.92	77.04	-23.03	34.56	8.63	34.1	103	244	Peak
5920	53.17	43.79	77.12	-23.95	34.81	8.73	34.16	103	244	Peak
*6007.675	45.67	36.16	54	-8.33	34.92	8.76	34.17	103	244	Average
*6007.675	54.95	45.44	74	-19.05	34.92	8.76	34.17	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5603.95	46.37	37.34	54	-7.63	34.5	8.61	34.08	100	279	Average
*5603.95	55.17	46.14	74	-18.83	34.5	8.61	34.08	100	279	Peak
5656.45	54.22	45.13	78.02	-23.8	34.56	8.63	34.1	100	279	Peak
5923.15	53.95	44.55	75.15	-21.2	34.83	8.73	34.16	100	279	Peak
*5988.25	45.74	36.28	54	-8.26	34.88	8.75	34.17	100	279	Average
*5988.25	55.86	46.4	74	-18.14	34.88	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5785 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	96.41	87.12			34.73	8.69	34.13	103	244	Average
5825	104.36	95.07			34.73	8.69	34.13	103	244	Peak
11650	46.87	31.34	54	-7.13	38.09	12.8	35.36	158	264	Average
11650	55.61	40.08	74	-18.39	38.09	12.8	35.36	158	264	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	95.03	85.74			34.73	8.69	34.13	100	279	Average
5825	102.79	93.5			34.73	8.69	34.13	100	279	Peak
11650	47.13	31.6	54	-6.87	38.09	12.8	35.36	129	166	Average
11650	56.04	40.51	74	-17.96	38.09	12.8	35.36	129	166	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5577.175	45.82	36.82	54	-8.18	34.47	8.6	34.07	103	244	Average
*5577.175	54.7	45.7	74	-19.3	34.47	8.6	34.07	103	244	Peak
5652.775	53.53	44.43	75.73	-22.2	34.56	8.63	34.09	103	244	Peak
5922.1	52.41	43.01	75.81	-23.4	34.83	8.73	34.16	103	244	Peak
*6000.325	45.28	35.79	54	-8.72	34.9	8.76	34.17	103	244	Average
*6000.325	54.42	44.93	74	-19.58	34.9	8.76	34.17	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5626	45.57	36.52	54	-8.43	34.52	8.61	34.08	100	279	Average
*5626	54.43	45.38	74	-19.57	34.52	8.61	34.08	100	279	Peak
5652.25	52.28	43.19	75.4	-23.12	34.56	8.62	34.09	100	279	Peak
5922.1	53.36	43.96	75.81	-22.45	34.83	8.73	34.16	100	279	Peak
*5966.725	45.32	35.87	54	-8.68	34.87	8.75	34.17	100	279	Average
*5966.725	54.24	44.79	74	-19.76	34.87	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5825 MHz: Fundamental Frequency
- \*: Out of Restricted Band

**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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5136.65	43.58	35.33	54	-10.42	34.11	8.13	33.99	101	241	Peak
5146.55	54.4	46.15	74	-19.6	34.12	8.13	34	101	241	Peak
5180	91.53	83.22			34.15	8.16	34	101	241	Average
5180	98.9	90.59			34.15	8.16	34	101	241	Peak
*10360	46.79	32.49	54	-7.21	37.12	12.3	35.12	174	351	Average
*10360	54.7	40.4	74	-19.3	37.12	12.3	35.12	174	351	Peak

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5094.8	55.1	46.94	74	-18.9	34.08	8.07	33.99	105	273	Peak
5147.9	44.49	36.24	54	-9.51	34.12	8.13	34	105	273	Peak
5180	93.07	84.76			34.15	8.16	34	105	273	Average
5180	100.28	91.97			34.15	8.16	34	105	273	Peak
*10360	46.91	32.61	54	-7.09	37.12	12.3	35.12	196	124	Average
*10360	55.39	41.09	74	-18.61	37.12	12.3	35.12	196	124	Peak

**Remarks:**

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5180 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 44	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5136.8	53.09	44.84	74	-20.91	34.11	8.13	33.99	101	241	Peak
5149.25	42.85	34.6	54	-11.15	34.12	8.13	34	101	241	Average
5220	92.25	83.86			34.17	8.22	34	101	241	Average
5220	99.7	91.31			34.17	8.22	34	101	241	Peak
5439.76	42.7	33.91	54	-11.3	34.35	8.48	34.04	101	241	Average
5445.92	53.25	44.42	74	-20.75	34.36	8.51	34.04	101	241	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5087.75	53.32	45.16	74	-20.68	34.07	8.07	33.98	105	273	Peak
5132.45	43	34.78	54	-11	34.11	8.1	33.99	105	273	Average
5220	93.02	84.63			34.17	8.22	34	105	273	Average
5220	100.85	92.46			34.17	8.22	34	105	273	Peak
5417.54	53.89	45.16	74	-20.11	34.33	8.44	34.04	105	273	Peak
5437.23	42.94	34.15	54	-11.06	34.35	8.48	34.04	105	273	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5220 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5240	92.44	84			34.19	8.26	34.01	101	241	Average
5240	99.49	91.05			34.19	8.26	34.01	101	241	Peak
5435.47	53.56	44.77	74	-20.44	34.35	8.48	34.04	101	241	Peak
5457.25	42.93	34.11	54	-11.07	34.36	8.51	34.05	101	241	Average
*10480	46.79	32.28	54	-7.21	37.19	12.53	35.21	114	315	Average
*10480	56.15	41.64	74	-17.85	37.19	12.53	35.21	114	315	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5240	94.27	85.83			34.19	8.26	34.01	105	273	Average
5240	101.81	93.37			34.19	8.26	34.01	105	273	Peak
5403.46	53.57	44.85	74	-20.43	34.32	8.44	34.04	105	273	Peak
5457.03	42.6	33.78	54	-11.4	34.36	8.51	34.05	105	273	Average
*10480	46.39	31.88	54	-7.61	37.19	12.53	35.21	121	208	Average
*10480	55.55	41.04	74	-18.45	37.19	12.53	35.21	121	208	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5240 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5111.9	53.09	44.89	74	-20.91	34.09	8.1	33.99	114	28	Peak
5146.25	42.51	34.26	54	-11.49	34.12	8.13	34	114	28	Average
5260	91.22	82.76			34.21	8.26	34.01	114	28	Average
5260	98.4	89.94			34.21	8.26	34.01	114	28	Peak
*10520	46.59	32	54	-7.41	37.21	12.61	35.23	149	213	Average
*10520	56.23	41.64	74	-17.77	37.21	12.61	35.23	149	213	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5055.5	54.11	46.01	74	-19.89	34.05	8.03	33.98	296	6	Peak
5093	42.44	34.28	54	-11.56	34.08	8.07	33.99	296	6	Average
5260	89.63	81.17			34.21	8.26	34.01	296	6	Average
5260	96.75	88.29			34.21	8.26	34.01	296	6	Peak
*10520	46.3	31.71	54	-7.7	37.21	12.61	35.23	114	159	Average
*10520	56.84	42.25	74	-17.16	37.21	12.61	35.23	114	159	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5260 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5024.75	53.74	45.71	74	-20.26	34.03	7.97	33.97	114	28	Peak
5108	42.55	34.35	54	-11.45	34.09	8.1	33.99	114	28	Average
5300	91.77	83.23			34.24	8.32	34.02	114	28	Average
5300	98.52	89.98			34.24	8.32	34.02	114	28	Peak
5353.96	42.94	34.31	54	-11.06	34.28	8.38	34.03	114	28	Average
5376.84	53.37	44.71	74	-20.63	34.29	8.41	34.04	114	28	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5092.1	52.93	44.76	74	-21.07	34.08	8.07	33.98	296	6	Peak
5113.7	42.44	34.24	54	-11.56	34.09	8.1	33.99	296	6	Average
5300	89.55	81.01			34.24	8.32	34.02	296	6	Average
5300	96.91	88.37			34.24	8.32	34.02	296	6	Peak
5352.97	53	44.37	74	-21	34.28	8.38	34.03	296	6	Peak
5385.09	42.89	34.21	54	-11.11	34.31	8.41	34.04	296	6	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5300 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	91.43	82.85			34.25	8.35	34.02	114	28	Average
5320	98.21	89.63			34.25	8.35	34.02	114	28	Peak
5354.29	43.37	34.74	54	-10.63	34.28	8.38	34.03	114	28	Average
5375.08	53.68	45.02	74	-20.32	34.29	8.41	34.04	114	28	Peak
10640	46.68	31.95	54	-7.32	37.31	12.71	35.29	174	124	Average
10640	56.39	41.66	74	-17.61	37.31	12.71	35.29	174	124	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	89.88	81.3			34.25	8.35	34.02	296	6	Average
5320	96.9	88.32			34.25	8.35	34.02	296	6	Peak
5352.53	43	34.37	54	-11	34.28	8.38	34.03	296	6	Average
5401.59	53.51	44.79	74	-20.49	34.32	8.44	34.04	296	6	Peak
10640	47.12	32.39	54	-6.88	37.31	12.71	35.29	112	310	Average
10640	57.01	42.28	74	-16.99	37.31	12.71	35.29	112	310	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5320 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5361.68	53.78	45.14	74	-20.22	34.29	8.38	34.03	100	243	Peak
5459.44	44	35.18	54	-10	34.36	8.51	34.05	100	243	Average
*5468.72	54.54	45.71	74	-19.46	34.37	8.51	34.05	100	243	Peak
*5469.36	44.47	35.64	54	-9.53	34.37	8.51	34.05	100	243	Average
5500	94.28	85.36			34.4	8.57	34.05	100	243	Average
5500	101.11	92.19			34.4	8.57	34.05	100	243	Peak
11000	47.37	32.29	54	-6.63	37.6	12.96	35.48	182	137	Average
11000	56.36	41.28	74	-17.64	37.6	12.96	35.48	182	137	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5453.2	54.57	45.75	74	-19.43	34.36	8.51	34.05	105	273	Peak
5460	44.56	35.74	54	-9.44	34.36	8.51	34.05	105	273	Average
*5468.24	44.87	36.04	54	-9.13	34.37	8.51	34.05	105	273	Average
*5468.88	54.35	45.52	74	-19.65	34.37	8.51	34.05	105	273	Peak
5500	93.74	84.82			34.4	8.57	34.05	105	273	Average
5500	100.89	91.97			34.4	8.57	34.05	105	273	Peak
11000	47.15	32.07	54	-6.85	37.6	12.96	35.48	137	165	Average
11000	55.99	40.91	74	-18.01	37.6	12.96	35.48	137	165	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5500 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5455.76	42.75	33.93	54	-11.25	34.36	8.51	34.05	100	243	Average
5457.2	54.7	45.88	74	-19.3	34.36	8.51	34.05	100	243	Peak
*5468.4	52.71	43.88	74	-21.29	34.37	8.51	34.05	100	243	Peak
*5470	42.69	33.86	54	-11.31	34.37	8.51	34.05	100	243	Average
5580	94.05	85.06			34.47	8.6	34.08	100	243	Average
5580	101.89	92.9			34.47	8.6	34.08	100	243	Peak
*5724.36	52.28	43.12	74	-21.72	34.62	8.65	34.11	100	243	Peak
*5725.64	43.02	33.86	54	-10.98	34.62	8.65	34.11	100	243	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5451.12	42.8	33.98	54	-11.2	34.36	8.51	34.05	105	273	Average
5459.92	53.19	44.37	74	-20.81	34.36	8.51	34.05	105	273	Peak
*5470.32	42.73	33.9	54	-11.27	34.37	8.51	34.05	105	273	Average
*5470.96	52.33	43.47	74	-21.67	34.37	8.54	34.05	105	273	Peak
5580	93.49	84.5			34.47	8.6	34.08	105	273	Average
5580	100.23	91.24			34.47	8.6	34.08	105	273	Peak
*5724.6	42.86	33.7	54	-11.14	34.62	8.65	34.11	105	273	Average
*5725.4	52.39	43.23	74	-21.61	34.62	8.65	34.11	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5580 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5700	94.53	85.4			34.59	8.64	34.1	100	243	Average
5700	101.01	91.88			34.59	8.64	34.1	100	243	Peak
*5724.28	44.81	35.65	54	-9.19	34.62	8.65	34.11	100	243	Average
*5724.36	54.41	45.25	74	-19.59	34.62	8.65	34.11	100	243	Peak
11400	47.52	32.42	54	-6.48	37.84	12.67	35.41	128	157	Average
11400	56.5	41.4	74	-17.5	37.84	12.67	35.41	128	157	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5700	93.35	84.22			34.59	8.64	34.1	105	273	Average
5700	100.79	91.66			34.59	8.64	34.1	105	273	Peak
*5724.92	53.32	44.16	74	-20.68	34.62	8.65	34.11	105	273	Peak
*5725.96	43.96	34.8	54	-10.04	34.62	8.65	34.11	105	273	Average
11400	48.26	33.16	54	-5.74	37.84	12.67	35.41	156	308	Average
11400	57.21	42.11	74	-16.79	37.84	12.67	35.41	156	308	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5700 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5370.16	54.08	45.41	74	-19.92	34.29	8.41	34.03	134	32	Peak
5459.76	42.89	34.07	54	-11.11	34.36	8.51	34.05	134	32	Average
*5468.72	42.78	33.95	54	-11.22	34.37	8.51	34.05	134	32	Average
*5470.96	51.98	43.12	74	-22.02	34.37	8.54	34.05	134	32	Peak
5720	95.24	86.08			34.62	8.65	34.11	134	32	Average
5720	103.24	94.08			34.62	8.65	34.11	134	32	Peak
5852	56.87	47.57	78.2	-21.33	34.74	8.7	34.14	134	32	Peak
5866	43.42	34.09	54	-10.58	34.76	8.71	34.14	134	32	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5429.84	42.82	34.03	54	-11.18	34.35	8.48	34.04	104	0	Average
5445.04	53.59	44.77	74	-20.41	34.35	8.51	34.04	104	0	Peak
*5469.2	42.88	34.05	54	-11.12	34.37	8.51	34.05	104	0	Average
*5470.96	52.49	43.63	74	-21.51	34.37	8.54	34.05	104	0	Peak
5720	93.64	84.48			34.62	8.65	34.11	104	0	Average
5720	101.99	92.83			34.62	8.65	34.11	104	0	Peak
5856	58.8	49.48	78.2	-19.4	34.76	8.7	34.14	104	0	Peak
5864	43.44	34.11	54	-10.56	34.76	8.71	34.14	104	0	Average

Remarks:

4. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
5. 5720 MHz: Fundamental Frequency
6. \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 149	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	95.37	86.18			34.64	8.66	34.11	103	244	Average
5745	103.99	94.8			34.64	8.66	34.11	103	244	Peak
11490	46.71	31.59	54	-7.29	37.89	12.62	35.39	196	305	Average
11490	55.74	40.62	74	-18.26	37.89	12.62	35.39	196	305	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	94.44	85.25			34.64	8.66	34.11	100	279	Average
5745	102.24	93.05			34.64	8.66	34.11	100	279	Peak
11490	47.54	32.42	54	-6.46	37.89	12.62	35.39	198	142	Average
11490	56.79	41.67	74	-17.21	37.89	12.62	35.39	198	142	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5644.9	45.06	35.99	54	-8.94	34.54	8.62	34.09	103	244	Average
*5644.9	54.69	45.62	74	-19.31	34.54	8.62	34.09	103	244	Peak
5652.25	53.64	44.55	75.4	-21.76	34.56	8.62	34.09	103	244	Peak
5923.675	52.49	43.09	74.83	-22.34	34.83	8.73	34.16	103	244	Peak
*6000.85	44.71	35.22	54	-9.29	34.9	8.76	34.17	103	244	Average
*6000.85	53.71	44.22	74	-20.29	34.9	8.76	34.17	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5599.75	45.71	36.69	54	-8.29	34.5	8.6	34.08	100	279	Average
*5599.75	54.92	45.9	74	-19.08	34.5	8.6	34.08	100	279	Peak
5653.825	53.09	44	76.39	-23.3	34.56	8.63	34.1	100	279	Peak
5922.625	52.95	43.55	75.48	-22.53	34.83	8.73	34.16	100	279	Peak
*6015.55	45.31	35.81	54	-8.69	34.92	8.76	34.18	100	279	Average
*6015.55	54.63	45.13	74	-19.37	34.92	8.76	34.18	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5745 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	94.94	85.71			34.68	8.68	34.13	103	244	Average
5785	103.08	93.85			34.68	8.68	34.13	103	244	Peak
11570	47.28	31.97	54	-6.72	38	12.68	35.37	142	108	Average
11570	56.19	40.88	74	-17.81	38	12.68	35.37	142	108	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	93.93	84.7			34.68	8.68	34.13	100	279	Average
5785	102.31	93.08			34.68	8.68	34.13	100	279	Peak
11570	47.69	32.38	54	-6.31	38	12.68	35.37	169	132	Average
11570	57	41.69	74	-17	38	12.68	35.37	169	132	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5617.075	45.66	36.61	54	-8.34	34.52	8.61	34.08	103	244	Average
*5617.075	54.85	45.8	74	-19.15	34.52	8.61	34.08	103	244	Peak
5657.5	53.99	44.9	78.68	-24.69	34.56	8.63	34.1	103	244	Peak
5922.625	52.68	43.28	75.48	-22.8	34.83	8.73	34.16	103	244	Peak
*5997.7	45.74	36.25	54	-8.26	34.9	8.76	34.17	103	244	Average
*5997.7	54.99	45.5	74	-19.01	34.9	8.76	34.17	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5581.9	44.92	35.91	54	-9.08	34.49	8.6	34.08	100	279	Average
*5581.9	53.7	44.69	74	-20.3	34.49	8.6	34.08	100	279	Peak
5654.35	52.62	43.53	76.71	-24.09	34.56	8.63	34.1	100	279	Peak
5922.625	51.78	42.38	75.48	-23.7	34.83	8.73	34.16	100	279	Peak
*6009.25	45.72	36.21	54	-8.28	34.92	8.76	34.17	100	279	Average
*6009.25	54.84	45.33	74	-19.16	34.92	8.76	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5785 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	95.76	86.47			34.73	8.69	34.13	103	244	Average
5825	103.38	94.09			34.73	8.69	34.13	103	244	Peak
11650	47.42	31.89	54	-6.58	38.09	12.8	35.36	158	196	Average
11650	56.61	41.08	74	-17.39	38.09	12.8	35.36	158	196	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	94.65	85.36			34.73	8.69	34.13	100	279	Average
5825	102.44	93.15			34.73	8.69	34.13	100	279	Peak
11650	47.54	32.01	54	-6.46	38.09	12.8	35.36	157	143	Average
11650	56.63	41.1	74	-17.37	38.09	12.8	35.36	157	143	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5643.325	45.28	36.21	54	-8.72	34.54	8.62	34.09	103	244	Average
*5643.325	54.15	45.08	74	-19.85	34.54	8.62	34.09	103	244	Peak
5652.25	53.08	43.99	75.4	-22.32	34.56	8.62	34.09	103	244	Peak
5922.625	52.38	42.98	75.48	-23.1	34.83	8.73	34.16	103	244	Peak
*5933.65	45.32	35.92	54	-8.68	34.83	8.73	34.16	103	244	Average
*5933.65	54.27	44.87	74	-19.73	34.83	8.73	34.16	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5537.8	45.13	36.19	54	-8.87	34.43	8.58	34.07	100	279	Average
*5537.8	54.07	45.13	74	-19.93	34.43	8.58	34.07	100	279	Peak
5651.2	52.03	42.94	74.75	-22.72	34.56	8.62	34.09	100	279	Peak
5922.625	50.89	41.49	75.48	-24.59	34.83	8.73	34.16	100	279	Peak
*5966.725	44.67	35.22	54	-9.33	34.87	8.75	34.17	100	279	Average
*5966.725	53.88	44.43	74	-20.12	34.87	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5825 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5142.8	56.73	48.47	74	-17.27	34.12	8.13	33.99	101	241	Peak
5149.85	44.22	35.97	54	-9.78	34.12	8.13	34	101	241	Average
5190	88.69	80.35			34.15	8.19	34	101	241	Average
5190	96.16	87.82			34.15	8.19	34	101	241	Peak
5372.44	53.73	45.06	74	-20.27	34.29	8.41	34.03	101	241	Peak
5443.39	43.2	34.41	54	-10.8	34.35	8.48	34.04	101	241	Average

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147	44.82	36.57	54	-9.18	34.12	8.13	34	105	273	Average
5150	57.33	49.08	74	-16.67	34.12	8.13	34	105	273	Peak
5190	90.18	81.84			34.15	8.19	34	105	273	Average
5190	97.04	88.7			34.15	8.19	34	105	273	Peak
5386.85	43.29	34.61	54	-10.71	34.31	8.41	34.04	105	273	Average
5407.31	53.2	44.48	74	-20.8	34.32	8.44	34.04	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5190 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5117.6	43.25	35.05	54	-10.75	34.09	8.1	33.99	101	241	Average
5145.35	54.35	46.1	74	-19.65	34.12	8.13	34	101	241	Peak
5230	88.57	80.17			34.19	8.22	34.01	101	241	Average
5230	96.43	88.03			34.19	8.22	34.01	101	241	Peak
5370.57	43.34	34.67	54	-10.66	34.29	8.41	34.03	101	241	Average
5437.56	53.59	44.8	74	-20.41	34.35	8.48	34.04	101	241	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5135	53.28	45.03	74	-20.72	34.11	8.13	33.99	105	273	Peak
5139.8	43.49	35.23	54	-10.51	34.12	8.13	33.99	105	273	Average
5230	90.97	82.57			34.19	8.22	34.01	105	273	Average
5230	97.79	89.39			34.19	8.22	34.01	105	273	Peak
5440.97	53.1	44.31	74	-20.9	34.35	8.48	34.04	105	273	Peak
5451.53	43.13	34.31	54	-10.87	34.36	8.51	34.05	105	273	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5230 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5073.35	53.24	45.12	74	-20.76	34.07	8.03	33.98	111	36	Peak
5129.45	42.92	34.7	54	-11.08	34.11	8.1	33.99	111	36	Average
5270	89.35	80.86			34.21	8.29	34.01	111	36	Average
5270	96.02	87.53			34.21	8.29	34.01	111	36	Peak
5357.15	43.08	34.45	54	-10.92	34.28	8.38	34.03	111	36	Average
5381.02	53.65	44.97	74	-20.35	34.31	8.41	34.04	111	36	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5099.3	53.13	44.97	74	-20.87	34.08	8.07	33.99	296	6	Peak
5132.45	42.88	34.66	54	-11.12	34.11	8.1	33.99	296	6	Average
5270	87.55	79.06			34.21	8.29	34.01	296	6	Average
5270	94.12	85.63			34.21	8.29	34.01	296	6	Peak
5386.85	53.94	45.26	74	-20.06	34.31	8.41	34.04	296	6	Peak
5446.25	43.01	34.18	54	-10.99	34.36	8.51	34.04	296	6	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5270 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5023.55	53.54	45.51	74	-20.46	34.03	7.97	33.97	111	36	Peak
5140.55	42.93	34.67	54	-11.07	34.12	8.13	33.99	111	36	Average
5310	89.97	81.42			34.25	8.32	34.02	111	36	Average
5310	96.67	88.12			34.25	8.32	34.02	111	36	Peak
5351.76	43.99	35.36	54	-10.01	34.28	8.38	34.03	111	36	Average
5352.2	56.71	48.08	74	-17.29	34.28	8.38	34.03	111	36	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5116.7	53.04	44.84	74	-20.96	34.09	8.1	33.99	296	6	Peak
5144.15	43.08	34.83	54	-10.92	34.12	8.13	34	296	6	Average
5310	87.4	78.85			34.25	8.32	34.02	296	6	Average
5310	94.8	86.25			34.25	8.32	34.02	296	6	Peak
5362.54	54.66	46.02	74	-19.34	34.29	8.38	34.03	296	6	Peak
5374.53	43.37	34.71	54	-10.63	34.29	8.41	34.04	296	6	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5310 MHz: Fundamental Frequency

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5453.04	44.73	35.91	54	-9.27	34.36	8.51	34.05	106	243	Average
5453.04	56.56	47.74	74	-17.44	34.36	8.51	34.05	106	243	Peak
*5469.04	45.23	36.4	54	-8.77	34.37	8.51	34.05	106	243	Average
*5470.48	57.02	48.19	74	-16.98	34.37	8.51	34.05	106	243	Peak
5510	92.43	83.52			34.4	8.57	34.06	106	243	Average
5510	99.07	90.16			34.4	8.57	34.06	106	243	Peak
*5724.36	52.43	43.27	74	-21.57	34.62	8.65	34.11	106	243	Peak
*5725.64	43.3	34.14	54	-10.7	34.62	8.65	34.11	106	243	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5446	56.34	47.51	74	-17.66	34.36	8.51	34.04	105	273	Peak
5460	44.89	36.07	54	-9.11	34.36	8.51	34.05	105	273	Average
*5470.16	60.37	51.54	74	-13.63	34.37	8.51	34.05	105	273	Peak
*5470.96	45.52	36.66	54	-8.48	34.37	8.54	34.05	105	273	Average
5510	90.5	81.59			34.4	8.57	34.06	105	273	Average
5510	97.19	88.28			34.4	8.57	34.06	105	273	Peak
*5725.16	51.48	42.32	74	-22.52	34.62	8.65	34.11	105	273	Peak
*5725.72	43.31	34.15	54	-10.69	34.62	8.65	34.11	105	273	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5510 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5376.4	53.87	45.21	74	-20.13	34.29	8.41	34.04	106	243	Peak
5456.72	43.79	34.97	54	-10.21	34.36	8.51	34.05	106	243	Average
*5469.36	43.72	34.89	54	-10.28	34.37	8.51	34.05	106	243	Average
*5470.96	52.45	43.59	74	-21.55	34.37	8.54	34.05	106	243	Peak
5550	92.46	83.49			34.45	8.59	34.07	106	243	Average
5550	99.29	90.32			34.45	8.59	34.07	106	243	Peak
*5723.96	43.22	34.06	54	-10.78	34.62	8.65	34.11	106	243	Average
*5724.2	52.72	43.56	74	-21.28	34.62	8.65	34.11	106	243	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5444.88	53.94	45.12	74	-20.06	34.35	8.51	34.04	105	273	Peak
5458.8	43.81	34.99	54	-10.19	34.36	8.51	34.05	105	273	Average
*5468.24	53.48	44.65	74	-20.52	34.37	8.51	34.05	105	273	Peak
*5470.96	43.89	35.03	54	-10.11	34.37	8.54	34.05	105	273	Average
5550	90.36	81.39			34.45	8.59	34.07	105	273	Average
5550	97.35	88.38			34.45	8.59	34.07	105	273	Peak
*5723.96	52.5	43.34	74	-21.5	34.62	8.65	34.11	105	273	Peak
*5724.68	43.4	34.24	54	-10.6	34.62	8.65	34.11	105	273	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5550 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5393.04	53.2	44.49	74	-20.8	34.31	8.44	34.04	106	243	Peak
5451.76	43.27	34.45	54	-10.73	34.36	8.51	34.05	106	243	Average
*5468.24	43	34.17	54	-11	34.37	8.51	34.05	106	243	Average
*5470.8	53.5	44.64	74	-20.5	34.37	8.54	34.05	106	243	Peak
5670	92.74	83.64			34.57	8.63	34.1	106	243	Average
5670	99.87	90.77			34.57	8.63	34.1	106	243	Peak
*5725.56	44.45	35.29	54	-9.55	34.62	8.65	34.11	106	243	Average
*5725.56	53.27	44.11	74	-20.73	34.62	8.65	34.11	106	243	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5371.28	53.36	44.69	74	-20.64	34.29	8.41	34.03	105	273	Peak
5446	43.23	34.4	54	-10.77	34.36	8.51	34.04	105	273	Average
*5470.8	51.87	43.01	74	-22.13	34.37	8.54	34.05	105	273	Peak
*5470.96	43.24	34.38	54	-10.76	34.37	8.54	34.05	105	273	Average
5670	90.92	81.82			34.57	8.63	34.1	105	273	Average
5670	97.46	88.36			34.57	8.63	34.1	105	273	Peak
*5724.12	44.02	34.86	54	-9.98	34.62	8.65	34.11	105	273	Average
*5725.4	52.82	43.66	74	-21.18	34.62	8.65	34.11	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5670 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5366.96	54.02	45.35	74	-19.98	34.29	8.41	34.03	134	34	Peak
5432.88	43.4	34.61	54	-10.6	34.35	8.48	34.04	134	34	Average
*5468.24	43.3	34.47	54	-10.7	34.37	8.51	34.05	134	34	Average
*5469.68	51.79	42.96	74	-22.21	34.37	8.51	34.05	134	34	Peak
5710	92.6	83.45			34.61	8.65	34.11	134	34	Average
5710	99.92	90.77			34.61	8.65	34.11	134	34	Peak
5858	57.51	48.19	78.2	-20.69	34.76	8.7	34.14	134	34	Peak
5864	43.45	34.12	54	-10.55	34.76	8.71	34.14	134	34	Average
5864	57.18	47.85	74	-16.82	34.76	8.71	34.14	134	34	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5381.84	53.44	44.76	74	-20.56	34.31	8.41	34.04	104	0	Peak
5447.44	43.37	34.54	54	-10.63	34.36	8.51	34.04	104	0	Average
*5468.08	43.27	34.44	54	-10.73	34.37	8.51	34.05	104	0	Average
*5469.2	52.52	43.69	74	-21.48	34.37	8.51	34.05	104	0	Peak
5710	92.94	83.79			34.61	8.65	34.11	104	0	Average
5710	101.21	92.06			34.61	8.65	34.11	104	0	Peak
5858	57.51	48.19	78.2	-20.69	34.76	8.7	34.14	104	0	Peak
5864	43.41	34.08	54	-10.59	34.76	8.71	34.14	104	0	Average
5864	57.97	48.64	74	-16.03	34.76	8.71	34.14	104	0	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5670 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 151	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	94.96	85.75			34.66	8.66	34.11	103	244	Average
5755	101.01	91.8			34.66	8.66	34.11	103	244	Peak
11510	47.81	32.7	54	-6.19	37.9	12.6	35.39	185	127	Average
11510	57.01	41.9	74	-16.99	37.9	12.6	35.39	185	127	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	91.77	82.56			34.66	8.66	34.11	100	279	Average
5755	98.96	89.75			34.66	8.66	34.11	100	279	Peak
11510	47.63	32.52	54	-6.37	37.9	12.6	35.39	139	162	Average
11510	56.76	41.65	74	-17.24	37.9	12.6	35.39	139	162	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5636.5	44.86	35.79	54	-9.14	34.54	8.62	34.09	103	244	Average
*5636.5	53.98	44.91	74	-20.02	34.54	8.62	34.09	103	244	Peak
5651.2	52.86	43.77	74.75	-21.89	34.56	8.62	34.09	103	244	Peak
5922.625	51.63	42.23	75.48	-23.85	34.83	8.73	34.16	103	244	Peak
*5936.8	45.38	35.98	54	-8.62	34.83	8.73	34.16	103	244	Average
*5936.8	54.48	45.08	74	-19.52	34.83	8.73	34.16	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5619.7	45.31	36.26	54	-8.69	34.52	8.61	34.08	100	279	Average
*5619.7	54.19	45.14	74	-19.81	34.52	8.61	34.08	100	279	Peak
5654.875	53.22	44.13	77.04	-23.82	34.56	8.63	34.1	100	279	Peak
5920	52.71	43.33	77.12	-24.41	34.81	8.73	34.16	100	279	Peak
*5977.225	45.25	35.79	54	-8.75	34.88	8.75	34.17	100	279	Average
*5977.225	54.05	44.59	74	-19.95	34.88	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5755 MHz: Fundamental Frequency
- \*: Out of Restricted Band

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	Karl Lee

**<Spurious Emission>**

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	91.97	82.74			34.68	8.68	34.13	103	244	Average
5785	99.3	90.07			34.68	8.68	34.13	103	244	Peak
11590	48.28	32.91	54	-5.72	38.02	12.72	35.37	185	231	Average
11590	57.17	41.8	74	-16.83	38.02	12.72	35.37	185	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5795	90.58	81.34			34.69	8.68	34.13	100	279	Average
5795	98.11	88.87			34.69	8.68	34.13	100	279	Peak
11590	47.51	32.14	54	-6.49	38.02	12.72	35.37	137	154	Average
11590	56.87	41.5	74	-17.13	38.02	12.72	35.37	137	154	Peak

**<Out of Band Emission (OOBE)>**

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5601.325	45.08	36.05	54	-8.92	34.5	8.61	34.08	103	244	Average
*5601.325	54.12	45.09	74	-19.88	34.5	8.61	34.08	103	244	Peak
5652.775	53.06	43.96	75.73	-22.67	34.56	8.63	34.09	103	244	Peak
5923.675	53.55	44.15	74.83	-21.28	34.83	8.73	34.16	103	244	Peak
*5953.075	45.71	36.28	54	-8.29	34.85	8.74	34.16	103	244	Average
*5953.075	54.61	45.18	74	-19.39	34.85	8.74	34.16	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5609.725	45.96	36.93	54	-8.04	34.5	8.61	34.08	100	279	Average
*5609.725	54.85	45.82	74	-19.15	34.5	8.61	34.08	100	279	Peak
5653.3	53.15	44.05	76.06	-22.91	34.56	8.63	34.09	100	279	Peak
5923.675	52.31	42.91	74.83	-22.52	34.83	8.73	34.16	100	279	Peak
*5939.95	46.31	36.88	54	-7.69	34.85	8.74	34.16	100	279	Average
*5939.95	55.02	45.59	74	-18.98	34.85	8.74	34.16	100	279	Peak

Remarks:

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

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5130.2	55.75	47.53	74	-18.25	34.11	8.1	33.99	105	273	Peak
5141.15	46.04	37.78	54	-7.96	34.12	8.13	33.99	105	273	Average
5210	86.67	78.31			34.17	8.19	34	105	273	Average
5210	95.1	86.74			34.17	8.19	34	105	273	Peak
5352.53	43.7	35.07	54	-10.3	34.28	8.38	34.03	105	273	Average
5367.71	53.79	45.12	74	-20.21	34.29	8.41	34.03	105	273	Peak

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5102.6	55.53	47.37	74	-18.47	34.08	8.07	33.99	101	241	Peak
5149.1	44.31	36.06	54	-9.69	34.12	8.13	34	101	241	Average
5210	85.94	77.58			34.17	8.19	34	101	241	Average
5210	93.94	85.58			34.17	8.19	34	101	241	Peak
5353.08	43.99	35.36	54	-10.01	34.28	8.38	34.03	101	241	Average
5448.78	53.38	44.55	74	-20.62	34.36	8.51	34.04	101	241	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5210 MHz: Fundamental Frequency

EUT Test Condition		Measurement Detail	
Channel	Channel 58	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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5127.8	55.1	46.88	74	-18.9	34.11	8.1	33.99	111	36	Peak
5147.9	44.29	36.04	54	-9.71	34.12	8.13	34	111	36	Average
5290	87.44	78.91			34.23	8.32	34.02	111	36	Average
5290	94.46	85.93			34.23	8.32	34.02	111	36	Peak
5354.84	44.96	36.33	54	-9.04	34.28	8.38	34.03	111	36	Average
5400.93	54.98	46.26	74	-19.02	34.32	8.44	34.04	111	36	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5144	53.86	45.61	74	-20.14	34.12	8.13	34	296	6	Peak
5149.85	43.85	35.6	54	-10.15	34.12	8.13	34	296	6	Average
5290	85.22	76.69			34.23	8.32	34.02	296	6	Average
5290	92.49	83.96			34.23	8.32	34.02	296	6	Peak
5404.67	53.91	45.19	74	-20.09	34.32	8.44	34.04	296	6	Peak
5415.78	44.53	35.8	54	-9.47	34.33	8.44	34.04	296	6	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5290 MHz: Fundamental Frequency

EUT Test Condition		Measurement Detail	
Channel	Channel 106	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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5426.16	55.5	46.73	74	-18.5	34.33	8.48	34.04	106	243	Peak
5431.92	46.24	37.45	54	-7.76	34.35	8.48	34.04	106	243	Average
*5468.24	45.85	37.02	54	-8.15	34.37	8.51	34.05	106	243	Average
*5470.16	54.45	45.62	74	-19.55	34.37	8.51	34.05	106	243	Peak
5530	90.36	81.43			34.42	8.58	34.07	106	243	Average
5530	97.73	88.8			34.42	8.58	34.07	106	243	Peak
*5724.84	53.59	44.43	74	-20.41	34.62	8.65	34.11	106	243	Peak
*5725.88	43.84	34.68	54	-10.16	34.62	8.65	34.11	106	243	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5427.76	56.28	47.51	74	-17.72	34.33	8.48	34.04	105	273	Peak
5431.92	47.06	38.27	54	-6.94	34.35	8.48	34.04	105	273	Average
*5468.24	46.55	37.72	54	-7.45	34.37	8.51	34.05	105	273	Average
*5470.48	54.59	45.76	74	-19.41	34.37	8.51	34.05	105	273	Peak
5530	88.44	79.51			34.42	8.58	34.07	105	273	Average
5530	95.17	86.24			34.42	8.58	34.07	105	273	Peak
*5725.08	43.74	34.58	54	-10.26	34.62	8.65	34.11	105	273	Average
*5725.64	52.32	43.16	74	-21.68	34.62	8.65	34.11	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5530 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 122	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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5454.64	55.01	46.19	74	-18.99	34.36	8.51	34.05	106	243	Peak
5460	44.21	35.39	54	-9.79	34.36	8.51	34.05	106	243	Average
*5469.68	44.73	35.9	54	-9.27	34.37	8.51	34.05	106	243	Average
*5470.16	54.66	45.83	74	-19.34	34.37	8.51	34.05	106	243	Peak
5610	90.52	81.49			34.5	8.61	34.08	106	243	Average
5610	97.68	88.65			34.5	8.61	34.08	106	243	Peak
*5724.68	45.75	36.59	54	-8.25	34.62	8.65	34.11	106	243	Average
*5725.32	55.32	46.16	74	-18.68	34.62	8.65	34.11	106	243	Peak

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5457.36	53.7	44.88	74	-20.3	34.36	8.51	34.05	105	273	Peak
5459.12	44.78	35.96	54	-9.22	34.36	8.51	34.05	105	273	Average
*5469.2	54.02	45.19	74	-19.98	34.37	8.51	34.05	105	273	Peak
*5470.96	45.47	36.61	54	-8.53	34.37	8.54	34.05	105	273	Average
5610	88.47	79.44			34.5	8.61	34.08	105	273	Average
5610	95.28	86.25			34.5	8.61	34.08	105	273	Peak
*5724.28	44.86	35.7	54	-9.14	34.62	8.65	34.11	105	273	Average
*5724.68	53.96	44.8	74	-20.04	34.62	8.65	34.11	105	273	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5610 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 138	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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5441.68	43.4	34.61	54	-10.6	34.35	8.48	34.04	134	34	Average
5456.08	53.51	44.69	74	-20.49	34.36	8.51	34.05	134	34	Peak
*5469.68	43.28	34.45	54	-10.72	34.37	8.51	34.05	134	34	Average
*5470.48	52.89	44.06	74	-21.11	34.37	8.51	34.05	134	34	Peak
5690	87.29	78.16			34.59	8.64	34.1	134	34	Average
5690	95.75	86.62			34.59	8.64	34.1	134	34	Peak
5852	57.75	48.45	78.2	-20.45	34.74	8.7	34.14	134	34	Peak
5862	43.46	34.13	54	-10.54	34.76	8.71	34.14	134	34	Average

Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5409.04	54.28	45.56	74	-19.72	34.32	8.44	34.04	104	0	Peak
5450.16	43.18	34.36	54	-10.82	34.36	8.51	34.05	104	0	Average
*5468.56	51.99	43.16	74	-22.01	34.37	8.51	34.05	104	0	Peak
*5469.68	43.41	34.58	54	-10.59	34.37	8.51	34.05	104	0	Average
5690	86.88	77.75			34.59	8.64	34.1	104	0	Average
5690	95.69	86.56			34.59	8.64	34.1	104	0	Peak
5854	58.13	48.81	78.2	-20.07	34.76	8.7	34.14	104	0	Peak
5870	43.46	34.13	54	-10.54	34.76	8.71	34.14	104	0	Average

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5690 MHz: Fundamental Frequency
- \*: Out of Restricted Band

EUT Test Condition		Measurement Detail	
Channel	Channel 155	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	Karl Lee

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5775	89.48	80.25			34.68	8.67	34.12	103	244	Average
5775	98.12	88.89			34.68	8.67	34.12	103	244	Peak
11550	47.35	32.08	54	-6.65	37.97	12.68	35.38	126	174	Average
11550	56.05	40.78	74	-17.95	37.97	12.68	35.38	126	174	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5775	88.5	79.27			34.68	8.67	34.12	100	279	Average
5775	97.22	87.99			34.68	8.67	34.12	100	279	Peak
11550	46.83	31.56	54	-7.17	37.97	12.68	35.38	108	354	Average
11550	55.66	40.39	74	-18.34	37.97	12.68	35.38	108	354	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5641.225	46.13	37.06	54	-7.87	34.54	8.62	34.09	103	244	Average
*5641.225	55.64	46.57	74	-18.36	34.54	8.62	34.09	103	244	Peak
5655.925	56.65	47.56	77.7	-21.05	34.56	8.63	34.1	103	244	Peak
5922.625	51.97	42.57	75.48	-23.51	34.83	8.73	34.16	103	244	Peak
*5938.375	45.82	36.41	54	-8.18	34.83	8.74	34.16	103	244	Average
*5938.375	55.06	45.65	74	-18.94	34.83	8.74	34.16	103	244	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5614.45	45.68	36.65	54	-8.32	34.5	8.61	34.08	100	279	Average
*5614.45	54.86	45.83	74	-19.14	34.5	8.61	34.08	100	279	Peak
5652.775	54.27	45.17	75.73	-21.46	34.56	8.63	34.09	100	279	Peak
5922.625	50.85	41.45	75.48	-24.63	34.83	8.73	34.16	100	279	Peak
*5979.325	45.13	35.67	54	-8.87	34.88	8.75	34.17	100	279	Average
*5979.325	53.91	44.45	74	-20.09	34.88	8.75	34.17	100	279	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
- 5775 MHz: Fundamental Frequency
- \*: Out of Restricted Band

**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:**

**802.11a**

EUT Test Condition		Measurement Detail	
Channel	Channel 36	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	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
99.66	10.55	31.87	43.5	-32.95	9.66	1.28	32.26	157	136	Peak
166.89	16.73	37.24	43.5	-26.77	10.22	1.52	32.25	133	108	Peak
220.62	9.66	28.5	46	-36.34	11.72	1.65	32.21	195	248	Peak
392.4	15.86	28.07	46	-30.14	17.65	2.34	32.2	163	149	Peak
570.2	18.94	28.17	46	-27.06	20.15	2.82	32.2	185	275	Peak
951.7	26.49	27.83	46	-19.51	26.12	3.62	31.08	143	168	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
93.18	7.37	28.96	43.5	-36.13	9.18	1.11	31.88	196	145	Peak
146.64	7.43	28.47	43.5	-36.07	9.85	1.38	32.27	184	117	Peak
253.83	11.83	28.87	46	-34.17	13.12	1.94	32.1	126	92	Peak
493.9	18.22	28.71	46	-27.78	18.98	2.63	32.1	129	147	Peak
731.2	23.6	29.19	46	-22.4	23.37	3.16	32.12	198	145	Peak
899.9	25.37	28.36	46	-20.63	25	3.49	31.48	133	108	Peak

Remarks:

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

Margin value = Emission level – Limit value

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 64	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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
112.62	14.95	36.7	43.5	-28.55	9.22	1.28	32.25	167	114	Peak
193.35	15.36	35.45	43.5	-28.14	10.57	1.61	32.27	168	345	Peak
267.33	12.42	29.1	46	-33.58	13.49	1.94	32.11	128	114	Peak
470.1	17.62	28.47	46	-28.38	18.72	2.56	32.13	185	327	Peak
694.1	23.74	29.58	46	-22.26	23.14	3.11	32.09	146	195	Peak
813.8	24.76	29.49	46	-21.24	23.94	3.32	31.99	164	112	Peak

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
59.7	18.87	43.37	40	-21.13	6.83	0.9	32.23	131	164	Peak
71.31	5.45	28.42	40	-34.55	8.14	1.11	32.22	198	243	Peak
228.99	9.13	27.39	46	-36.87	12.07	1.85	32.18	108	155	Peak
391.7	16.09	28.45	46	-29.91	17.5	2.34	32.2	139	166	Peak
576.5	19.18	28.46	46	-26.82	20.1	2.82	32.2	198	245	Peak
857.2	24.45	28.76	46	-21.55	24	3.44	31.75	174	162	Peak

Remarks:

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

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 140	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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
99.66	10.55	31.87	43.5	-32.95	9.66	1.28	32.26	115	169	Peak
143.4	12.73	34.01	43.5	-30.77	9.61	1.38	32.27	195	43	Peak
186.6	13.83	34.07	43.5	-29.67	10.4	1.61	32.25	145	127	Peak
430.9	16.9	28.89	46	-29.1	17.78	2.41	32.18	197	124	Peak
556.9	19.38	28.57	46	-26.62	20.25	2.76	32.2	153	240	Peak
798.4	24.92	29.24	46	-21.08	24.42	3.32	32.06	174	115	Peak

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
39.18	15.13	34.83	40	-24.87	11.79	0.74	32.23	142	137	Peak
105.06	9.37	30.81	43.5	-34.13	9.54	1.28	32.26	185	274	Peak
269.76	12.2	28.79	46	-33.8	13.58	1.94	32.11	198	243	Peak
448.4	16.8	28.49	46	-29.2	17.97	2.49	32.15	141	162	Peak
519.1	19.22	28.33	46	-26.78	20.32	2.7	32.13	166	348	Peak
931.4	27.33	28.76	46	-18.67	26.2	3.62	31.25	178	145	Peak

Remarks:

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

## 802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 149	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	Karl Lee

**Antenna Polarity & Test Distance: Horizontal at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
54.3	9.4	33.37	40	-30.6	7.36	0.9	32.23	125	134	Peak
123.69	16.85	38.81	43.5	-26.65	8.9	1.38	32.24	187	342	Peak
167.43	16.32	36.83	43.5	-27.18	10.22	1.52	32.25	196	147	Peak
466.6	17.15	28.09	46	-28.85	18.63	2.56	32.13	182	173	Peak
721.4	23.08	28.67	46	-22.92	23.36	3.16	32.11	195	283	Peak
831.3	23.12	28.03	46	-22.88	23.6	3.38	31.89	164	127	Peak

**Antenna Polarity & Test Distance: Vertical at 3 m**

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
83.19	5.38	27.76	40	-34.62	8.57	1.11	32.06	168	321	Peak
128.28	7.81	29.56	43.5	-35.69	9.1	1.38	32.23	174	142	Peak
203.88	8.7	28.29	43.5	-34.8	11.04	1.65	32.28	153	108	Peak
402.2	17.78	29.6	46	-28.22	18.06	2.34	32.22	103	168	Peak
631.8	20.47	27.61	46	-25.53	22.1	2.93	32.17	172	134	Peak
804	24.62	28.96	46	-21.38	24.38	3.32	32.04	168	143	Peak

## Remarks:

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

## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

### 4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

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

#### 4.2.3 Test Procedures

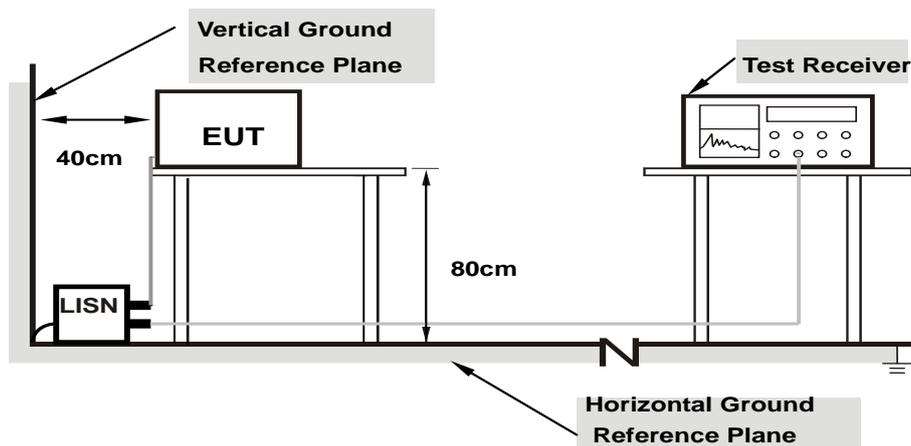
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



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

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

#### 4.2.6 EUT Operating Conditions

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

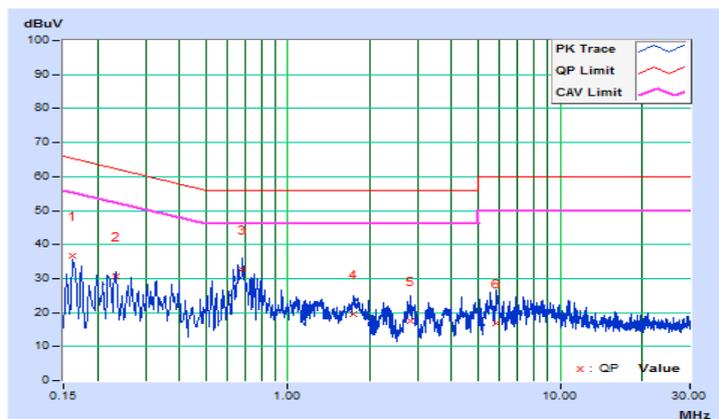
#### 4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Getaz Yang	Test Date	2017/5/23

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	10.35	26.40	11.74	36.75	22.09	65.36	55.36	-28.61	-33.27
2	0.23400	10.38	20.24	8.63	30.62	19.01	62.31	52.31	-31.69	-33.30
3	0.68200	10.40	22.27	10.84	32.67	21.24	56.00	46.00	-23.33	-24.76
4	1.73800	10.44	9.07	1.70	19.51	12.14	56.00	46.00	-36.49	-33.86
5	2.83000	10.51	6.96	-0.02	17.47	10.49	56.00	46.00	-38.53	-35.51
6	5.82600	10.65	6.29	-0.94	16.94	9.71	60.00	50.00	-43.06	-40.29

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

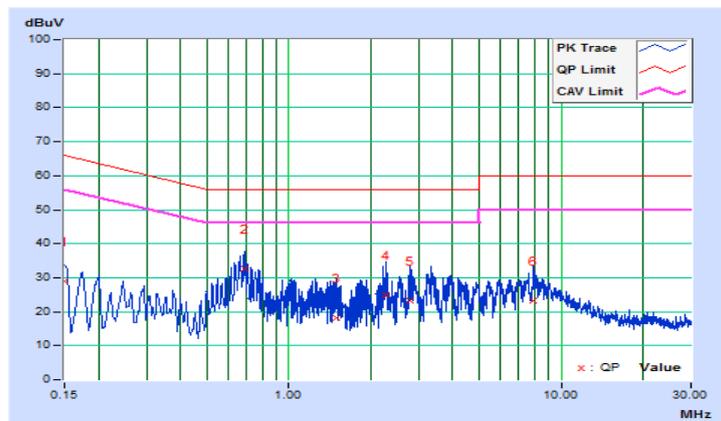


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Getaz Yang	Test Date	2017/5/23

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	0.15000	10.10	18.96	6.66	29.06	16.76	66.00	56.00	-36.94	-39.24
2	0.68592	10.16	22.55	13.67	32.71	23.83	56.00	46.00	-23.29	-22.17
3	1.49000	10.20	7.99	0.40	18.19	10.60	56.00	46.00	-37.81	-35.40
4	2.28600	10.25	14.60	5.36	24.85	15.61	56.00	46.00	-31.15	-30.39
5	2.80200	10.27	12.96	5.50	23.23	15.77	56.00	46.00	-32.77	-30.23
6	7.94997	10.48	12.76	6.56	23.24	17.04	60.00	50.00	-36.76	-32.96

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

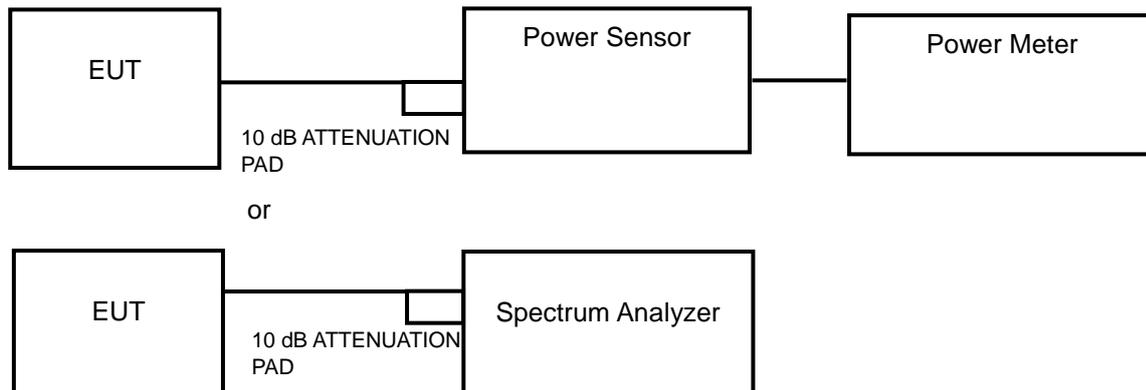
#### 4.3.1 Limits of Transmit Power Measurement

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

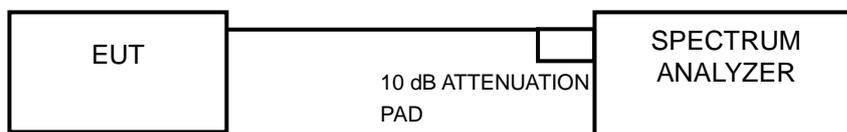
\*B is the 26 dB emission bandwidth in megahertz

#### 4.3.2 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)>

Method SA-1 is used to perform output power measurement, trigger and gating function of spectrum analyzer is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

##### **26 dB Bandwidth**

- 1) Set RBW = approximately 1 % of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) 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 Result

##### Power Output:

##### 802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	16.672	12.22	24.00	Pass
44	5220	16.596	12.20	24.00	Pass
48	5240	16.406	12.15	24.00	Pass
52	5260	16.106	12.07	23.83	Pass
60	5300	16.827	12.26	23.81	Pass
64	5320	16.331	12.13	23.82	Pass
100	5500	16.904	12.28	23.83	Pass
116	5580	16.749	12.24	23.83	Pass
140	5700	16.711	12.23	23.83	Pass
2c-144	5720	17.69	12.48	22.72	Pass
3-144	5720	17.69	12.48	30.00	Pass
149	5745	17.1	12.33	30.00	Pass
157	5785	17.66	12.47	30.00	Pass
165	5825	17.061	12.32	30.00	Pass

##### Note:

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

1.  $11 \text{ dBm} + 10\log(19.19) = 23.83 \text{ dBm} < 24 \text{ dBm}$ .
2.  $11 \text{ dBm} + 10\log(19.14) = 23.82 \text{ dBm} < 24 \text{ dBm}$ .
3.  $11 \text{ dBm} + 10\log(19.15) = 23.82 \text{ dBm} < 24 \text{ dBm}$ .
4.  $11 \text{ dBm} + 10\log(19.19) = 23.83 \text{ dBm} < 24 \text{ dBm}$ .
5.  $11 \text{ dBm} + 10\log(19.19) = 23.83 \text{ dBm} < 24 \text{ dBm}$ .
6.  $11 \text{ dBm} + 10\log(19.19) = 23.83 \text{ dBm} < 24 \text{ dBm}$ .
7.  $11 \text{ dBm} + 10\log(14.88) = 22.72 \text{ dBm} < 24 \text{ dBm}$ .

### 802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	16.032	12.05	24	Pass
44	5220	15.959	12.03	24	Pass
48	5240	15.922	12.02	24	Pass
52	5260	15.812	11.99	24	Pass
60	5300	15.524	11.91	24	Pass
64	5320	15.596	11.93	24	Pass
100	5500	16.106	12.07	24	Pass
116	5580	15.996	12.04	24	Pass
140	5700	16.181	12.09	24	Pass
2c-144	5720	16.825	12.26	22.85	Pass
3-144	5720	16.825	12.26	30	Pass
149	5745	15.959	12.03	30	Pass
157	5785	16.52	12.18	30	Pass
165	5825	16.106	12.07	30	Pass

**Note:**

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

1.  $11 \text{ dBm} + 10\log(20.42) = 24.10 \text{ dBm} > 24 \text{ dBm}$ .
2.  $11 \text{ dBm} + 10\log(20.31) = 24.08 \text{ dBm} > 24 \text{ dBm}$ .
3.  $11 \text{ dBm} + 10\log(20.41) = 24.10 \text{ dBm} > 24 \text{ dBm}$ .
4.  $11 \text{ dBm} + 10\log(20.44) = 24.10 \text{ dBm} > 24 \text{ dBm}$ .
5.  $11 \text{ dBm} + 10\log(20.47) = 24.11 \text{ dBm} > 24 \text{ dBm}$ .
6.  $11 \text{ dBm} + 10\log(20.43) = 24.10 \text{ dBm} > 24 \text{ dBm}$ .
7.  $11 \text{ dBm} + 10\log(15.34) = 22.85 \text{ dBm} < 24 \text{ dBm}$ .

### 802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	15.74	11.97	24	Pass
46	5230	15.56	11.92	24	Pass
54	5270	15.417	11.88	24	Pass
62	5310	15.524	11.91	24	Pass
102	5510	15.631	11.94	24	Pass
110	5550	15.812	11.99	24	Pass
134	5670	15.596	11.93	24	Pass
2c-142	5710	17.547	12.44	24	Pass
3-142	5710	17.547	12.44	30	Pass
151	5755	16.331	12.13	30	Pass
159	5795	16.293	12.12	30	Pass

**Note:**

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

1.  $11 \text{ dBm} + 10\log(41.72) = 27.20 \text{ dBm} > 24 \text{ dBm}$ .
2.  $11 \text{ dBm} + 10\log(41.74) = 27.21 \text{ dBm} > 24 \text{ dBm}$ .
3.  $11 \text{ dBm} + 10\log(41.83) = 27.21 \text{ dBm} > 24 \text{ dBm}$ .
4.  $11 \text{ dBm} + 10\log(41.82) = 27.21 \text{ dBm} > 24 \text{ dBm}$ .
5.  $11 \text{ dBm} + 10\log(41.94) = 27.23 \text{ dBm} > 24 \text{ dBm}$ .
6.  $11 \text{ dBm} + 10\log(35.99) = 26.56 \text{ dBm} > 24 \text{ dBm}$ .

### 802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	12.078	10.82	24	Pass
58	5290	13.868	11.42	24	Pass
106	5530	16.634	12.21	24	Pass
122	5610	13.459	11.29	24	Pass
2c-138	5690	15.085	11.79	24	Pass
3-138	5690	15.085	11.79	30	Pass
155	5775	13.9	11.43	30	Pass

**Note:**

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

1.  $11 \text{ dBm} + 10\log(83.54) = 30.22 \text{ dBm} > 24 \text{ dBm}$ .
2.  $11 \text{ dBm} + 10\log(83.38) = 30.21 \text{ dBm} > 24 \text{ dBm}$ .
3.  $11 \text{ dBm} + 10\log(83.83) = 30.23 \text{ dBm} > 24 \text{ dBm}$ .
4.  $11 \text{ dBm} + 10\log(76.17) = 29.81 \text{ dBm} > 24 \text{ dBm}$ .

**26 dB Bandwidth:**
**802.11a**

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	19.22
44	5220	19.40
48	5240	19.22
52	5260	19.19
60	5300	19.14
64	5320	19.15
100	5500	19.19
116	5580	19.19
140	5700	19.19
2c-144	5720	14.88

**802.11n (HT20)**

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	20.35
44	5220	20.26
48	5240	20.35
52	5260	20.42
60	5300	20.31
64	5320	20.41
100	5500	20.44
116	5580	20.47
140	5700	20.43
2c-144	5720	15.34

**802.11n (HT40)**

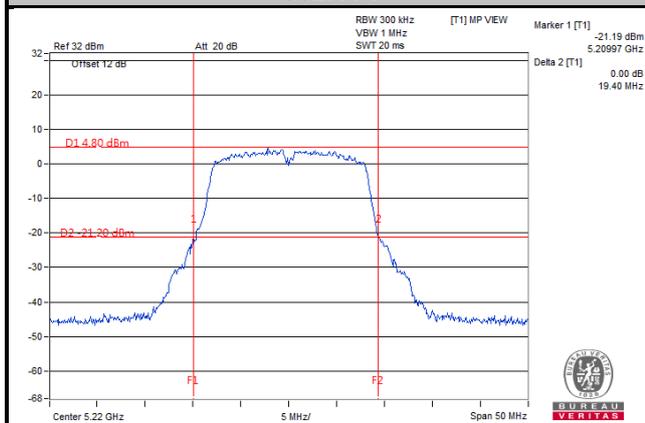
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
38	5190	41.85
46	5230	41.92
54	5270	41.72
62	5310	41.74
102	5510	41.83
110	5550	41.82
134	5670	41.94
2c-142	5710	35.99

### 802.11ac (VHT80)

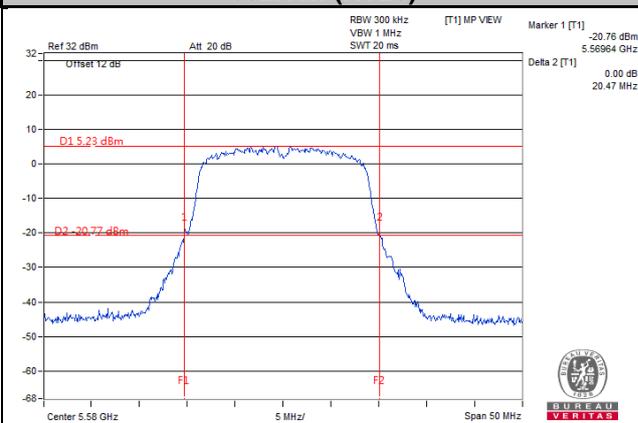
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
42	5210	83.17
58	5290	83.54
106	5530	83.38
122	5610	83.83
2c-138	5690	76.17

### Spectrum Plot of Worst Value

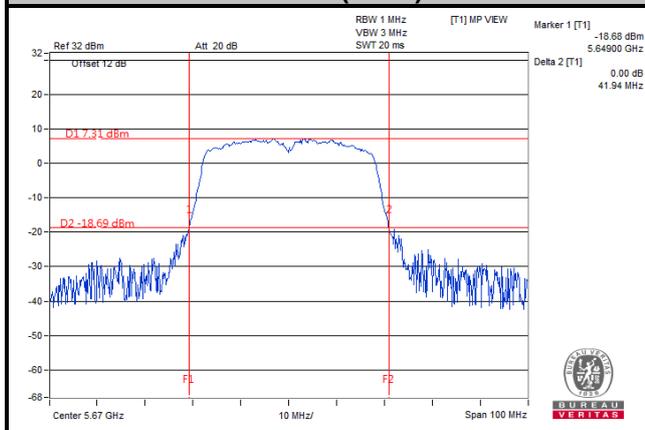
#### 802.11a



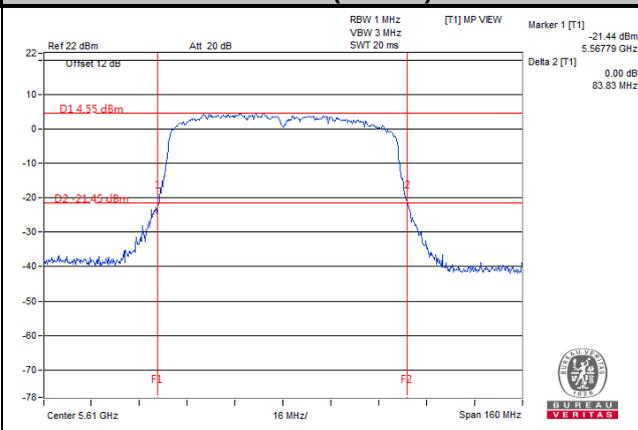
#### 802.11n (HT20)



#### 802.11n (HT40)



#### 802.11ac (VHT80)

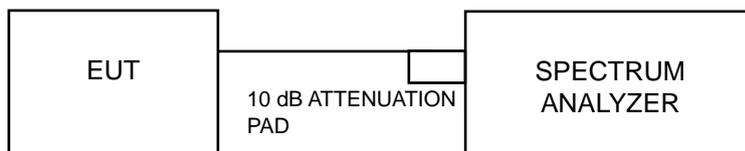


#### 4.4 Peak Power Spectral Density Measurement

##### 4.4.1 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

##### 4.4.2 Test Setup



##### 4.4.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

##### 4.4.4 Test Procedures

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

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW  $\geq$  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:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 500 kHz, Set VBW  $\geq$  3 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
4. Sweep time = auto, trigger set to "free run".
5. Trace average at least 100 traces in power averaging mode.
6. Record the max value and add 10 log (1/duty cycle)

#### 4.4.5 Deviation from Test Standard

No deviation.

#### 4.4.6 EUT Operating Conditions

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

#### 4.4.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	1.26	0.29	1.55	11	Pass
44	5220	1.33	0.29	1.62	11	Pass
48	5240	1.17	0.29	1.46	11	Pass
52	5260	1.19	0.29	1.48	11	Pass
60	5300	1.27	0.29	1.56	11	Pass
64	5320	1.14	0.29	1.43	11	Pass
100	5500	1.13	0.29	1.42	11	Pass
116	5580	1.26	0.29	1.55	11	Pass
140	5700	1.21	0.29	1.50	11	Pass
2c-144	5720	0.56	0.29	0.85	11	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
36	5180	1.04	0.26	1.30	11	Pass
44	5220	1.18	0.26	1.44	11	Pass
48	5240	1.12	0.26	1.38	11	Pass
52	5260	1.14	0.26	1.40	11	Pass
60	5300	1.27	0.26	1.53	11	Pass
64	5320	1.04	0.26	1.30	11	Pass
100	5500	1.06	0.26	1.32	11	Pass
116	5580	1.12	0.26	1.38	11	Pass
140	5700	1.16	0.26	1.42	11	Pass
2c-144	5720	0.12	0.26	0.38	11	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
38	5190	-2.01	0.47	-1.54	11	Pass
46	5230	-2.11	0.47	-1.64	11	Pass
54	5270	-2.13	0.47	-1.66	11	Pass
62	5310	-2.03	0.47	-1.56	11	Pass
102	5510	-2.25	0.47	-1.78	11	Pass
110	5550	-2.14	0.47	-1.67	11	Pass
134	5670	-2.19	0.47	-1.72	11	Pass
2c-142	5710	-2.85	0.47	-2.38	11	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

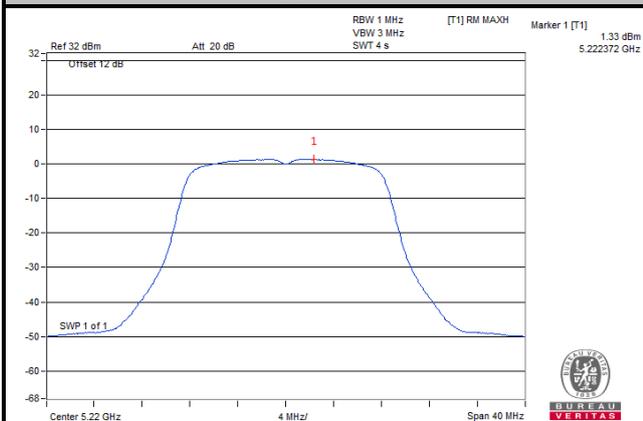
### 802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
42	5210	-6.56	0.84	-5.72	11	Pass
58	5290	-5.93	0.84	-5.09	11	Pass
106	5530	-5.28	0.84	-4.44	11	Pass
122	5610	-6.22	0.84	-5.38	11	Pass
2c-138	5690	-6.11	0.84	-5.28	11	Pass

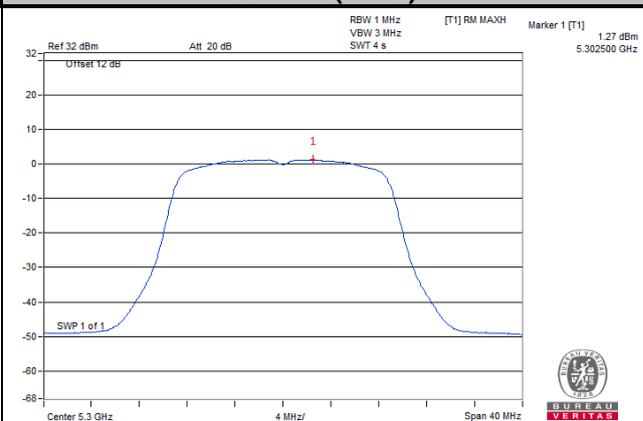
**Note:** Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

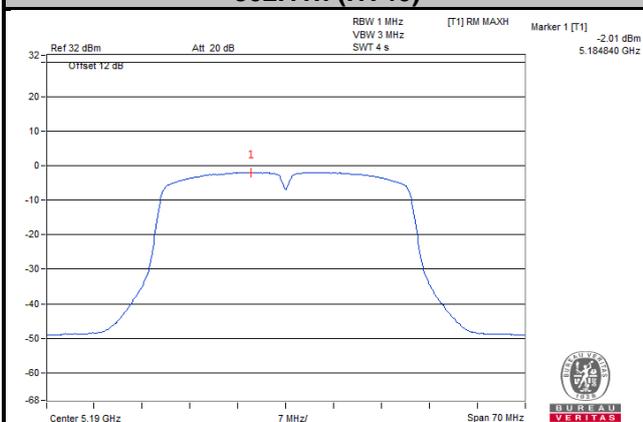
#### 802.11a



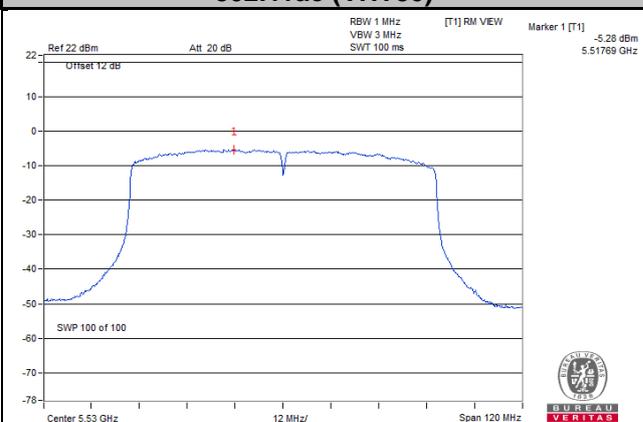
#### 802.11n (HT20)



#### 802.11n (HT40)



#### 802.11ac (VHT80)



## For U-NII-3 Band

### 802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
3-144	5720	-2.64	0.29	-2.35	30	Pass
149	5745	-2.07	0.29	-1.78	30	Pass
157	5785	-1.76	0.29	-1.47	30	Pass
165	5825	-1.88	0.29	-1.59	30	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
3-144	5720	-3.02	0.26	-2.76	30	Pass
149	5745	-2.37	0.26	-2.11	30	Pass
157	5785	-2.14	0.26	-1.88	30	Pass
165	5825	-2.28	0.26	-2.02	30	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

### 802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
3-142	5710	-7.61	0.47	-7.14	30	Pass
151	5755	-5.24	0.47	-4.77	30	Pass
159	5795	-5.33	0.47	-4.86	30	Pass

**Note:** Refer to section 3.3 for duty cycle spectrum plot.

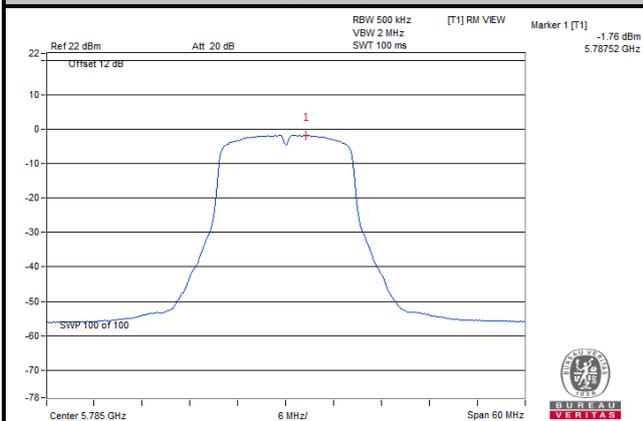
### 802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
3-138	5690	-12.36	0.84	-9.30	30	Pass
155	5775	-8.85	0.84	-8.01	30	Pass

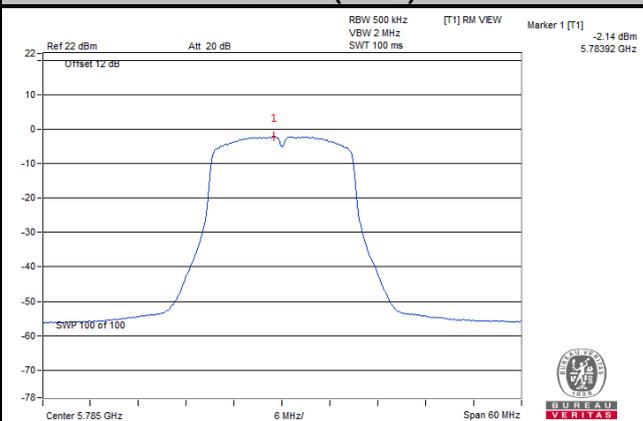
**Note:** Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

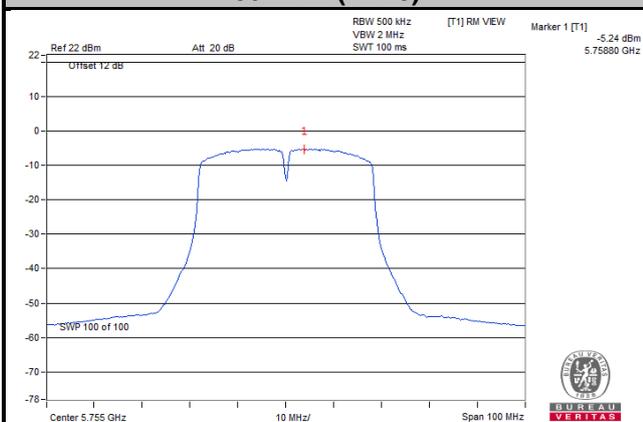
#### 802.11a



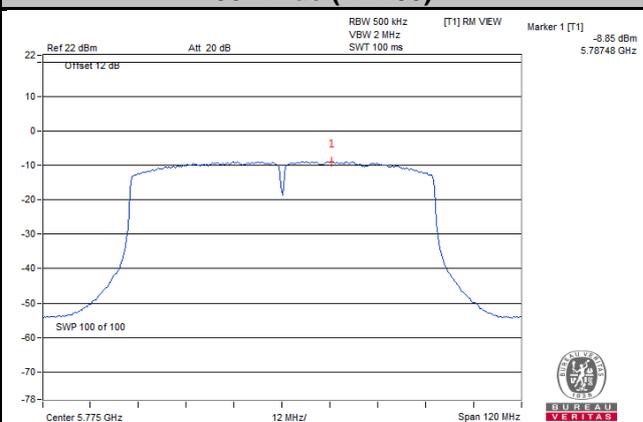
#### 802.11n (HT20)



#### 802.11n (HT40)



#### 802.11ac (VHT80)

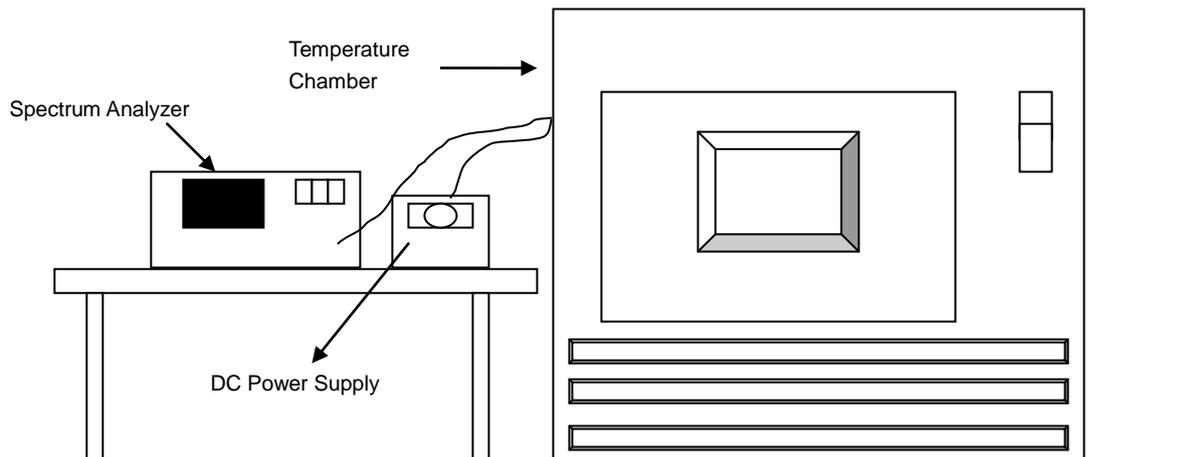


## 4.5 Frequency Stability

### 4.5.1 Limit of Frequency Stability Measurement

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

### 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 Procedure

- To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.
- The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5320 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)						
50	3.85	5180.0053	0.00010	5180.0054	0.00010	5180.0036	0.00007	5180.0012	0.00002
40	3.85	5180.0197	0.00038	5180.0174	0.00034	5180.0173	0.00033	5180.0223	0.00043
30	3.85	5179.9992	-0.00002	5179.9994	-0.00001	5179.9996	-0.00001	5180.0027	0.00005
20	3.85	5179.984	-0.00031	5179.9851	-0.00029	5179.9861	-0.00027	5179.988	-0.00023
10	3.85	5180.0009	0.00002	5180.0053	0.00010	5180.0038	0.00007	5180.0023	0.00004
0	3.85	5180.0006	0.00001	5180.0008	0.00002	5180.0007	0.00001	5180.0049	0.00009
-10	3.85	5180.0004	0.00001	5180.0022	0.00004	5179.9995	-0.00001	5179.9999	0.00000
-20	3.85	5179.9796	-0.00039	5179.9796	-0.00039	5179.9772	-0.00044	5179.9789	-0.00041
-30	3.85	5179.9884	-0.00022	5179.9913	-0.00017	5179.9891	-0.00021	5179.9901	-0.00019

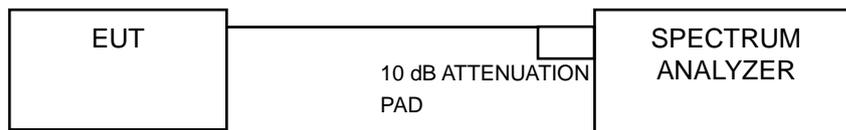
Frequency Stability Versus Temp.									
Operating Frequency: 5320 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)						
20	4.3	5179.9833	-0.00032	5179.9859	-0.00027	5179.9861	-0.00027	5179.9885	-0.00022
	3.85	5179.984	-0.00031	5179.9851	-0.00029	5179.9861	-0.00027	5179.988	-0.00023
	3.7	5179.9843	-0.00030	5179.9843	-0.00030	5179.9855	-0.00028	5179.9885	-0.00022

## 4.6 6 dB Bandwidth Measurement

### 4.6.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

### 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

#### MEASUREMENT PROCEDURE REF

- Set resolution bandwidth (RBW) = 100 kHz
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- 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

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

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

#### 4.6.7 Test Results

##### 802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3-144	5720	15.16	0.5	Pass
149	5745	15.01	0.5	Pass
157	5785	15.17	0.5	Pass
165	5825	15.13	0.5	Pass

##### 802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3-144	5720	15.19	0.5	Pass
149	5745	15.16	0.5	Pass
157	5785	15.17	0.5	Pass
165	5825	15.13	0.5	Pass

##### 802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3-142	5710	35.17	0.5	Pass
151	5755	35.18	0.5	Pass
159	5795	34.00	0.5	Pass

##### 802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3-138	5690	75.38	0.5	Pass
155	5775	75.27	0.5	Pass

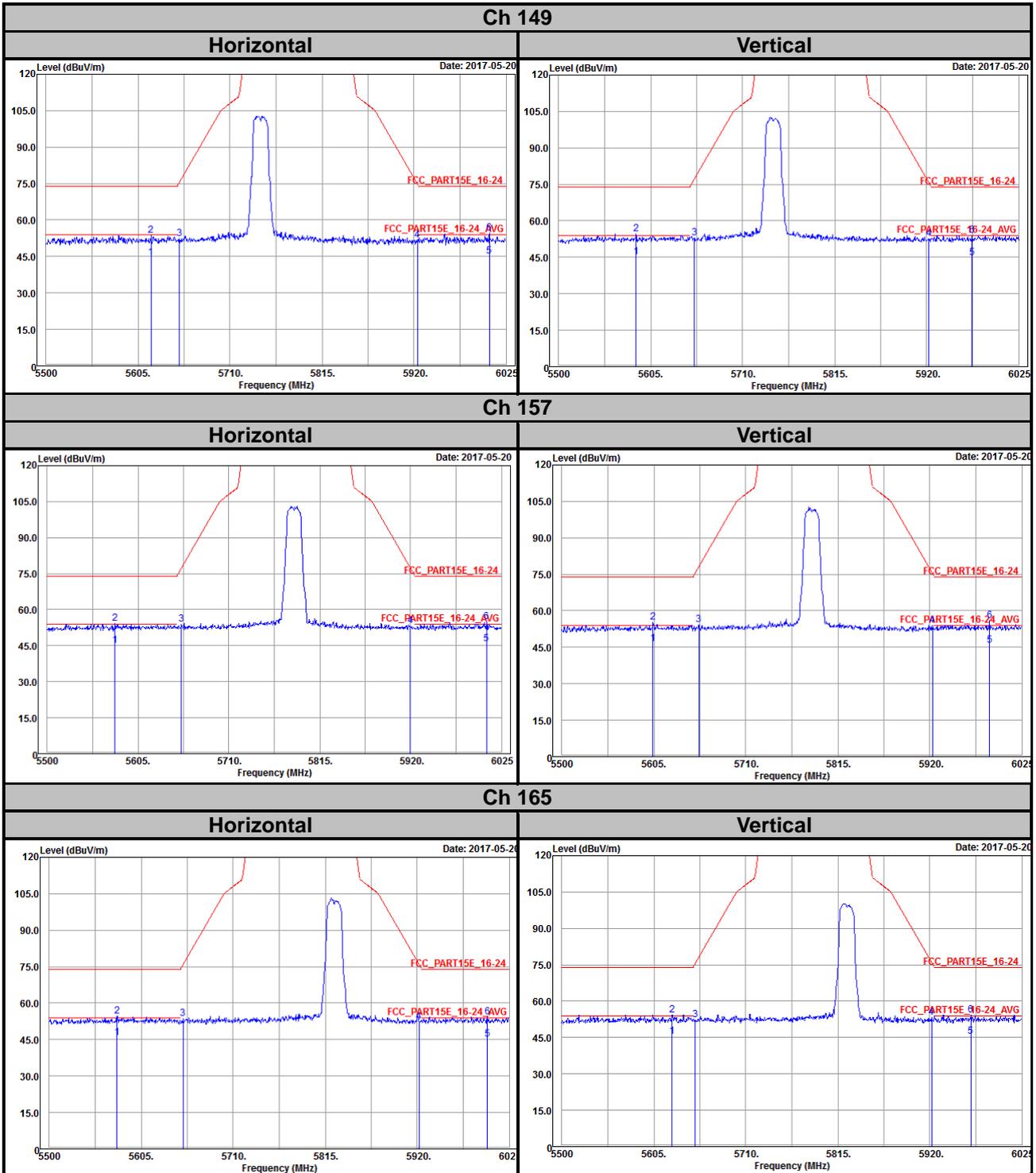


## 5 Pictures of Test Arrangements

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

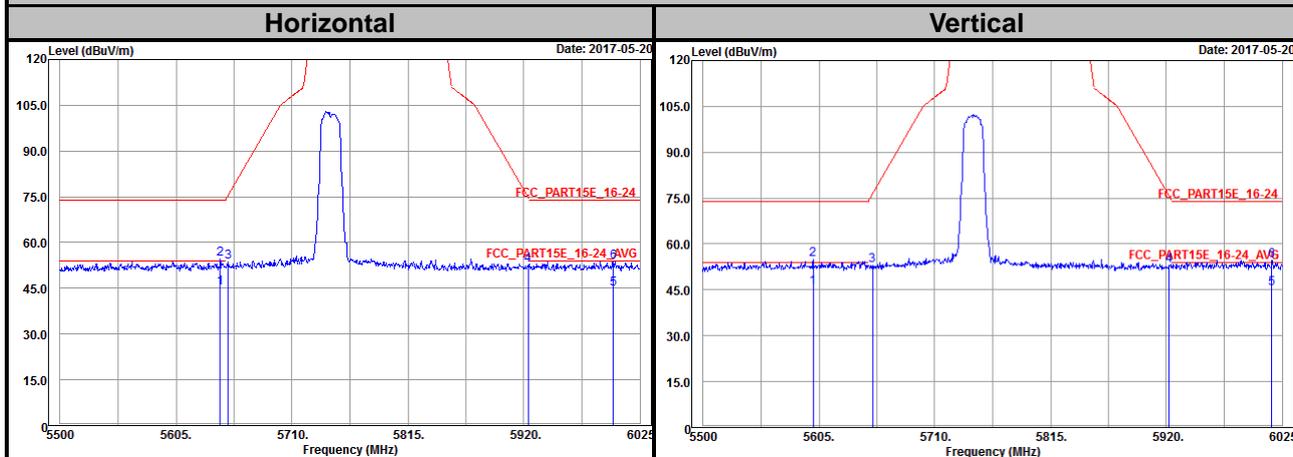
# Annex A- Radiated Out of Band Emisison (OOBE) Measurement (For U-NII-3 band)

## 802.11a

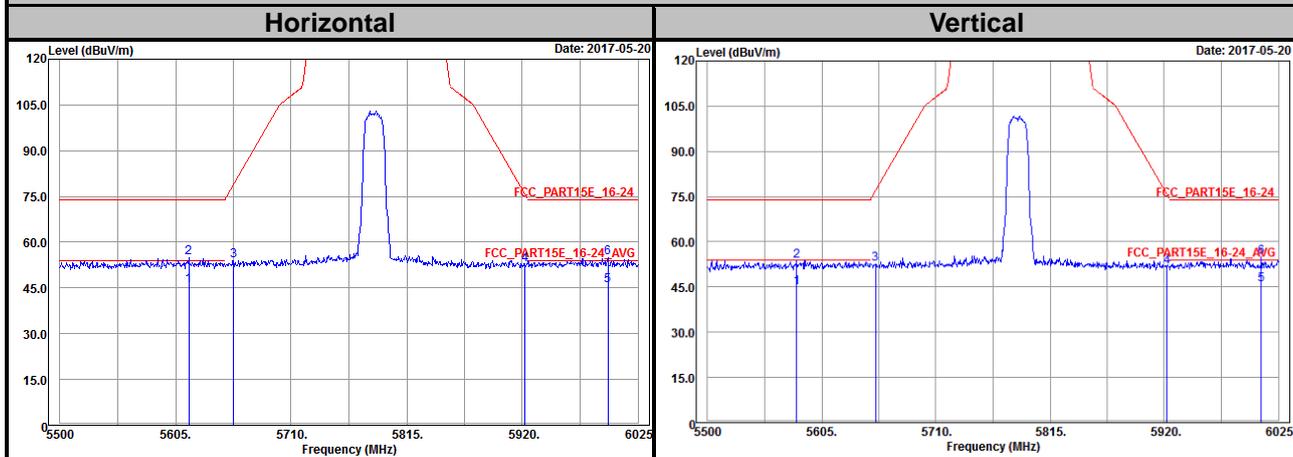


802.11n (HT20)

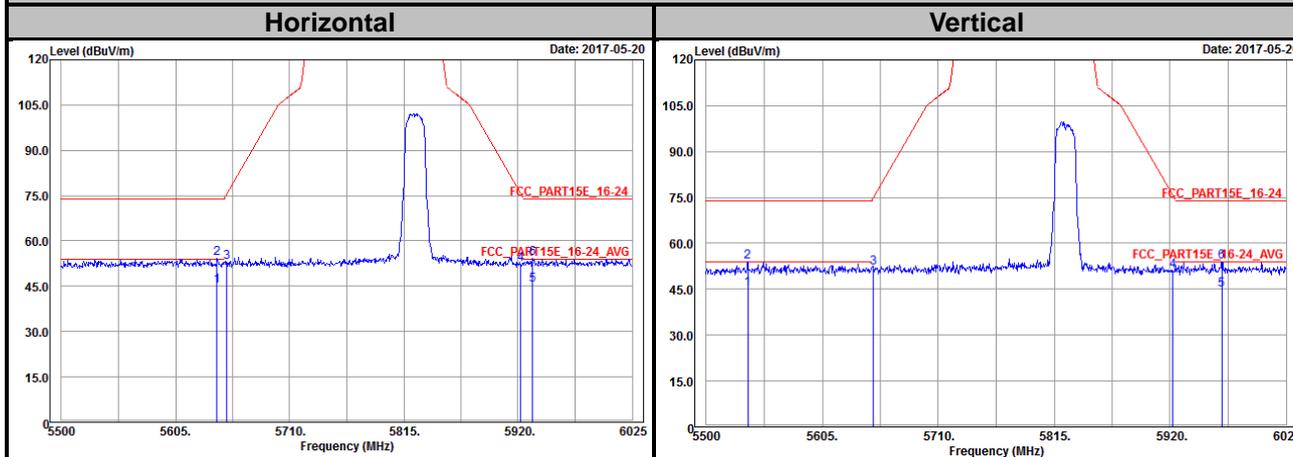
Ch 149



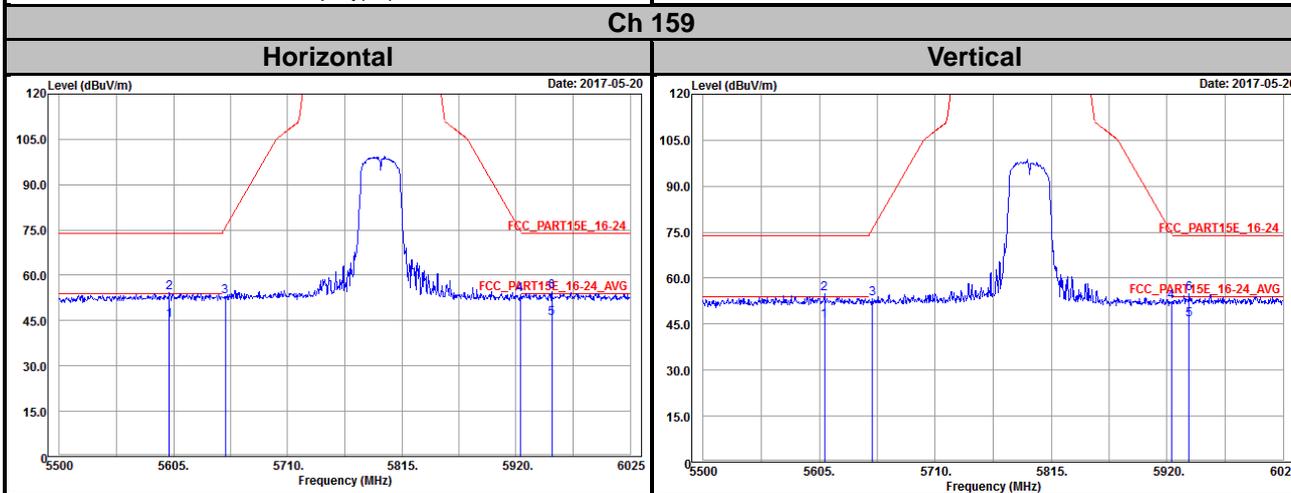
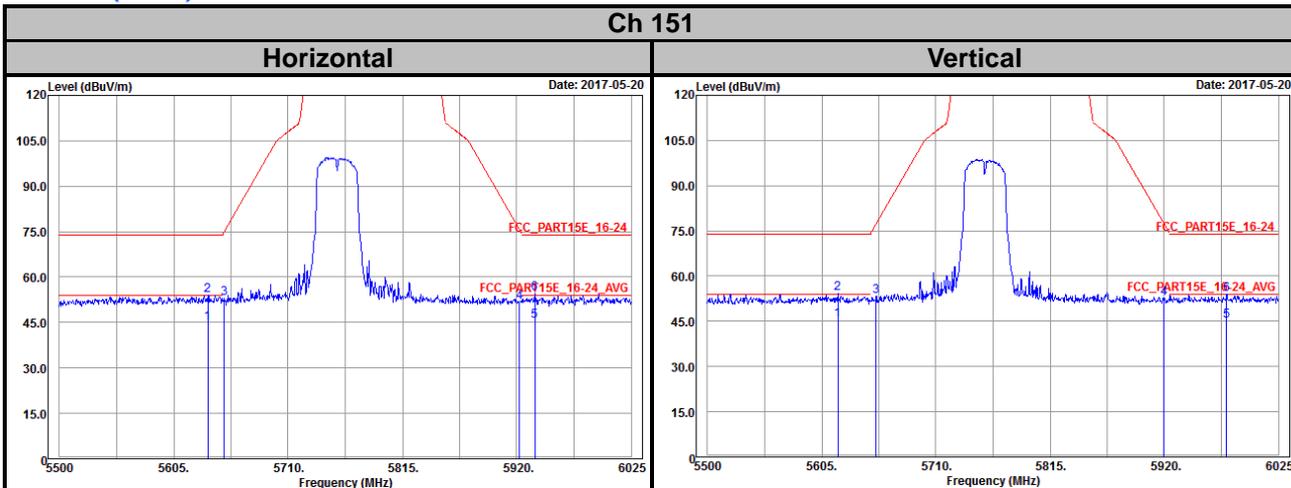
Ch 157



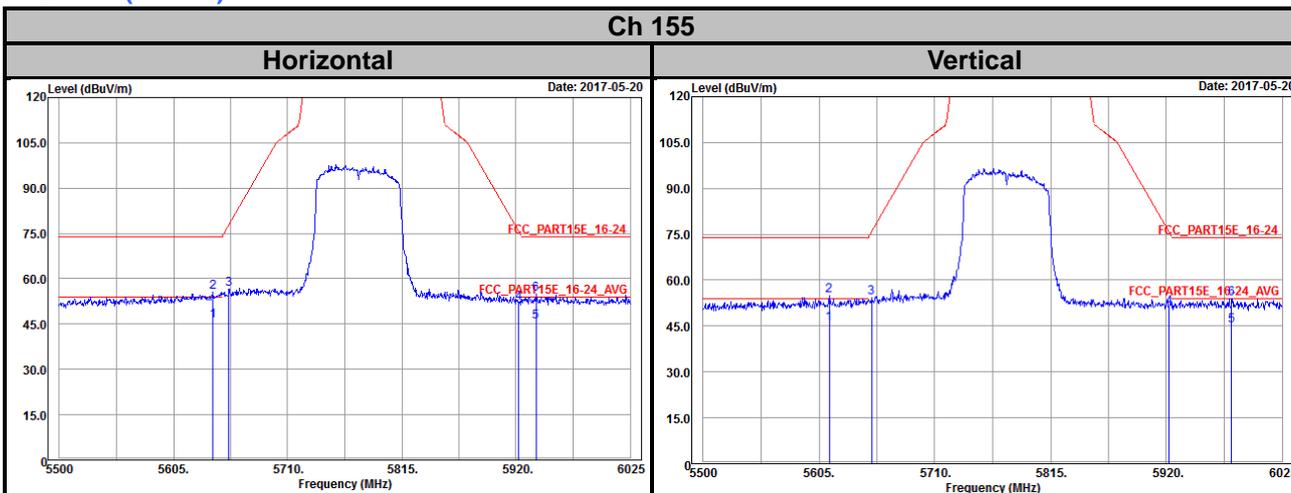
Ch 165



802.11n (HT40)



802.11ac (VHT80)



## Appendix – Information on the Testing Laboratories

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

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**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

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

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