

FCC Test Report

Report No.: RF170113C11-3

FCC ID: HFS-TX7

Test Model: PD132512

Received Date: Jan. 13, 2017

Test Date: Jan. 26, 2017 ~ Feb. 09, 2017

Issued Date: Feb. 18, 2017

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Release Control Record

Issue No.	Description	Date Issued
RF170113C11-3	Original Release	Feb. 18, 2017

1 Certificate of Conformity

Product: 2 in 1 notebook

Brand: Porsche Design

Test Model: PD132512

Sample Status: Identical Prototype

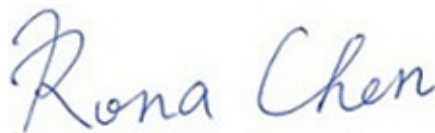
Applicant: Quanta Computer Inc.

Test Date: Jan. 26, 2017 ~ Feb. 09, 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:

Feb. 18, 2017

Rona Chen / Specialist

Approved by :



Date:

Feb. 18, 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 -11.64 dB at 18.68359 MHz.
15.407(b)(1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.74 dB at 5351.87 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	N/A	Refer to Note.
15.407(a)(1/2/3)	Peak Power Spectral Density	N/A	Refer to Note.
15.407(e)	6 dB Bandwidth	N/A	Refer to Note.
15.407(g)	Frequency Stability	N/A	Refer to Note.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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

Note: Test items for AC Power Conducted Emission and Radiated Emissions were performed for this report.

For other test data, please refer to QuieTek Report No.: 1540115R-RFUSP01V00, 1540115R-RFUSP05V00, and 1540115R-RFUSP05V00-A for module (Brand: Intel, Model: 8260D2W). We had verified the conducted power of the EUT, and the power was not worse than the module report. Furthermore, the antenna type of the EUT is the same with the module, but the gain is different. Therefore, the Conducted test items can apply to the module report, and only AC Power Conducted Emission and Radiated Emissions has been re-tested.

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

Product	2 in 1 notebook
Brand	Porsche Design
Test Model	PD132512
Status of EUT	Identical Prototype
Power Supply Rating	5 / 9 / 12 / 15 / 20 Vdc (Adapter) 7.6 Vdc (Li-ion battery)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0 Mbps 802.11n: up to MCS7 802.11ac: up to V9
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
Number of Channel	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: 11 for 802.11a, 802.11n (HT20) 5 for 802.11n (HT40) 2 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80)
Antenna Type	PIFA antenna with 0.86 dBi gain (5180 ~ 5240 MHz) PIFA antenna with 1.19 dBi gain (5260 ~ 5320 MHz) PIFA antenna with 2.39 dBi gain (5500 ~ 5700 MHz) PIFA antenna with 2.39 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

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

Modulation Mode	Tx Function
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX
802.11ac (VHT80)	2TX

* The modulation and bandwidth are similar for 802.11n mode for HT20 / HT40 and 802.11ac mode for HT20 / HT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	PORSCHE DESIGN (Mfr. : FSP)	FSP060-A1UR FSP060-A1NR FSP060-A1GR FSP060-A1ER (Different models are for the difference of plug type)	I/P: 100-240 Vac, 50/60 Hz, 1.5 A O/P: 5 / 9 / 12 Vdc, 2 A or O/P: 15 / 20 Vdc, 3 A
Battery 1 - Tablet	NVT	3059C3N	7.6 Vdc, 3235 mAh
Battery 2 - Docking	NVT	494088N	15.4 Vdc, 2945 mAh
BT/WLAN Module	Intel	8260D2W	--

3. The module (Intel® Dual Band Wireless-AC 8260, Brand: Intel, Model: 8260D2W) is allocated in the EUT.
4. 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 ~ 5700 MHz

11 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		

5 channels are provided for 802.11n (HT40):

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	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	
A	√	√	-	1Tx
B	√	√	√	2Tx

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: The EUT had been pre-tested on the positioned of each 3 axis and Notebook mode. The worst case was found when positioned on **Notebook mode**.

Radiated Emission Test (Above 1 GHz):

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

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5180-5240	802.11a	36 to 48	36, 44, 48	OFDM	BPSK	6.0
B		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
A	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
B		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
A	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
B		802.11n (HT20)	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
		802.11n (HT40)	102 to 134	102, 110, 134	OFDM	BPSK	MCS0
		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	MCS0
A	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
B		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)
B	5180-5240	802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0
B	5260-5320	802.11ac (VHT80)	58	58	OFDM	BPSK	MCS0
A	5500-5700	802.11a	100 to 140	140	OFDM	BPSK	MCS0
B	5745-5825	802.11ac (VHT80)	155	155	OFDM	BPSK	MCS0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
B	5180-5240	802.11ac (VHT80)	42	42	OFDM	BPSK	MCS0

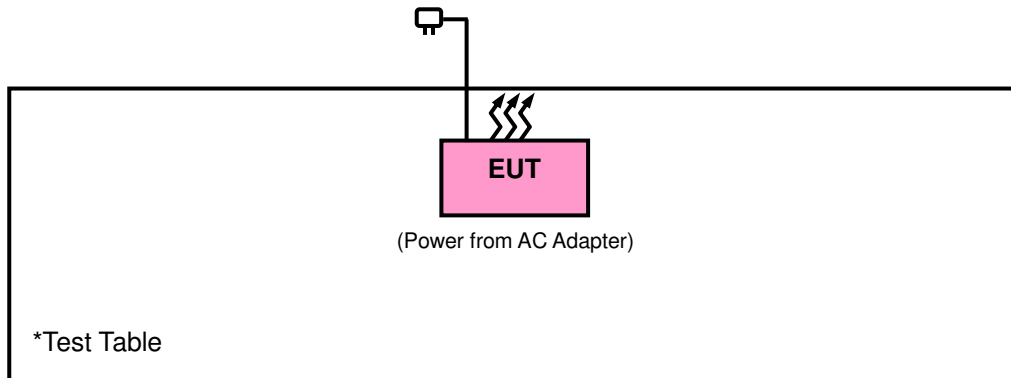
Test Condition:

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	Toby Tian

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01r03

644545 D01 Guidance for IEEE 802 11ac v01r02

662911 D01 Multiple Transmitter Output v02r01

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) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2 (dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8 (dBμV/m) ^{*3} PK:122.2 (dBμV/m) ^{*4}
	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

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

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

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

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

Note:

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

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

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	FSU43	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
Bluetooth Tester	CBT	100980	Apr. 27, 2015	Apr. 26, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Agilent Communications Tester-Wireless	8960 Series 10	MY53201073	Jul. 03, 2015	Jul. 02, 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:

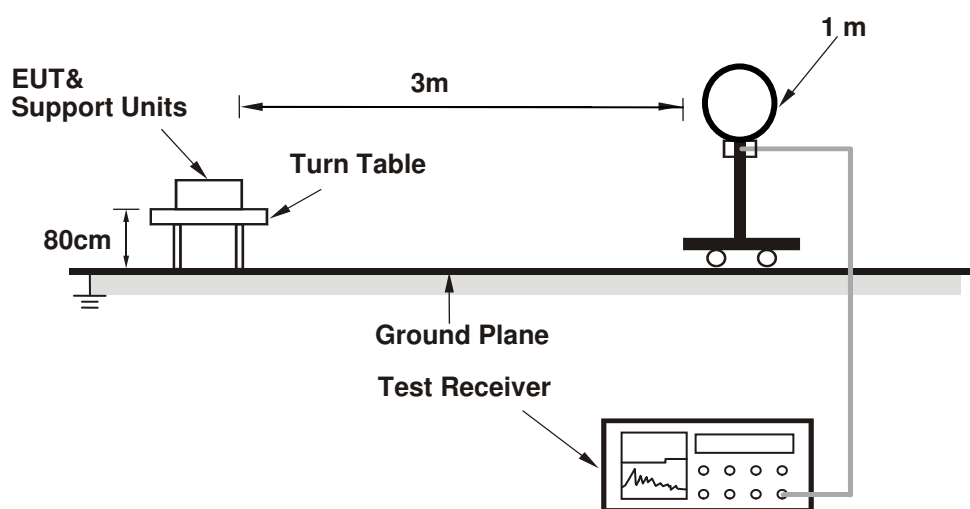
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1/T for RMS Average (Duty cycle < 98 %) for Peak 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

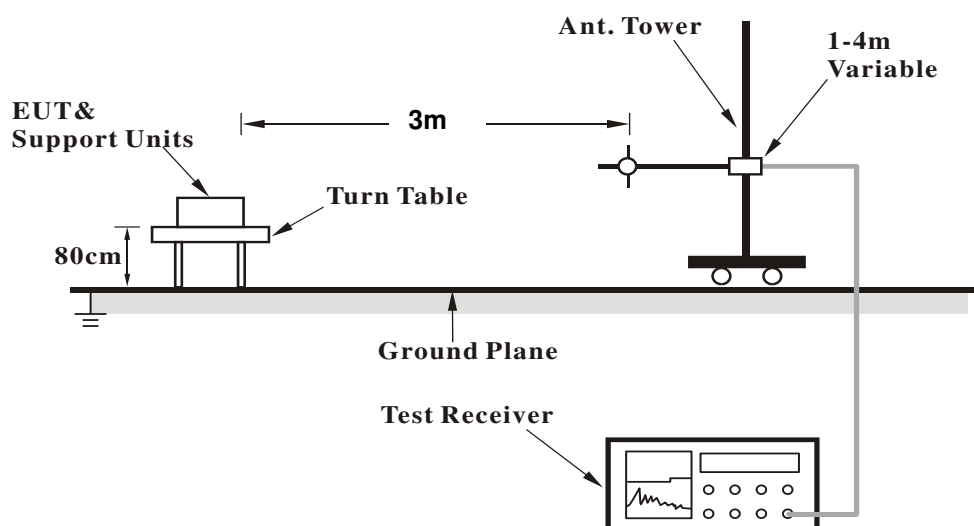
No deviation.

4.1.6 Test Set Up

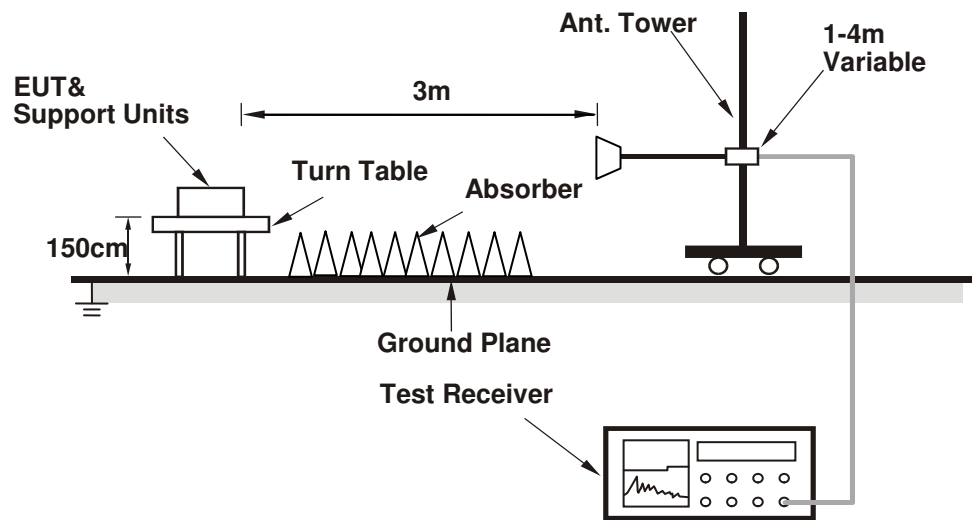
<Radiated emission below 30MHz>



<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 :

Mode A

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
5149.25	44.69	36.44	54	-9.31	34.12	8.13	34	214	46	Average
5149.85	55.58	47.33	74	-18.42	34.12	8.13	34	214	46	Peak
5180	98.35	90.04			34.15	8.16	34	214	46	Average
5180	105.66	97.35			34.15	8.16	34	214	46	Peak
*10360	47.82	33.52	54	-6.18	37.12	12.3	35.12	164	308	Average
*10360	56.61	42.31	74	-17.39	37.12	12.3	35.12	164	308	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
5136.35	54.57	46.32	74	-19.43	34.11	8.13	33.99	166	0	Peak
5149.7	44.82	36.57	54	-9.18	34.12	8.13	34	166	0	Average
5180	99.01	90.7			34.15	8.16	34	166	0	Average
5180	106.18	97.87			34.15	8.16	34	166	0	Peak
*10360	47.64	33.34	54	-6.36	37.12	12.3	35.12	158	106	Average
*10360	54.57	40.27	74	-19.43	37.12	12.3	35.12	158	106	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
5133.05	55	46.78	74	-19	34.11	8.1	33.99	166	0	Peak
5143.85	43.53	35.28	54	-10.47	34.12	8.13	34	166	0	Average
5220	98.7	90.31			34.17	8.22	34	166	0	Average
5220	105.48	97.09			34.17	8.22	34	166	0	Peak
5372.33	54.06	45.39	74	-19.94	34.29	8.41	34.03	166	0	Peak
5375.08	43.89	35.23	54	-10.11	34.29	8.41	34.04	166	0	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
5069.9	53.8	45.7	74	-20.2	34.05	8.03	33.98	215	46	Peak
5149.25	43.09	34.84	54	-10.91	34.12	8.13	34	215	46	Average
5220	98.41	90.02			34.17	8.22	34	215	46	Average
5220	105.47	97.08			34.17	8.22	34	215	46	Peak
5372.33	43.16	34.49	54	-10.84	34.29	8.41	34.03	215	46	Average
5393.12	54.49	45.78	74	-19.51	34.31	8.44	34.04	215	46	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	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	97.67	89.23			34.19	8.26	34.01	211	46	Average
5240	104.76	96.32			34.19	8.26	34.01	211	46	Peak
5352.2	53.53	44.9	74	-20.47	34.28	8.38	34.03	211	46	Peak
5392.68	43.09	34.41	54	-10.91	34.31	8.41	34.04	211	46	Average
*10480	47.87	33.36	54	-6.13	37.19	12.53	35.21	162	49	Average
*10480	56.79	42.28	74	-17.21	37.19	12.53	35.21	162	49	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	98.08	89.64			34.19	8.26	34.01	165	0	Average
5240	105.09	96.65			34.19	8.26	34.01	165	0	Peak
5369.25	54.91	46.24	74	-19.09	34.29	8.41	34.03	165	0	Peak
5395.76	43.73	35.01	54	-10.27	34.32	8.44	34.04	165	0	Average
*10480	47.93	33.42	54	-6.07	37.19	12.53	35.21	129	191	Average
*10480	55.83	41.32	74	-18.17	37.19	12.53	35.21	129	191	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
5140.85	42.9	34.64	54	-11.1	34.12	8.13	33.99	140	359	Average
5145.65	53.92	45.67	74	-20.08	34.12	8.13	34	140	359	Peak
5260	98.48	90.02			34.21	8.26	34.01	140	359	Average
5260	105.71	97.25			34.21	8.26	34.01	140	359	Peak
*10520	46.58	31.99	54	-7.42	37.21	12.61	35.23	105	85	Average
*10520	56.95	42.36	74	-17.05	37.21	12.61	35.23	105	85	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
5064.35	53.6	45.5	74	-20.4	34.05	8.03	33.98	247	0	Peak
5144	43.15	34.9	54	-10.85	34.12	8.13	34	247	0	Average
5260	99.47	91.01			34.21	8.26	34.01	247	0	Average
5260	106.44	97.98			34.21	8.26	34.01	247	0	Peak
*10520	46.73	32.14	54	-7.27	37.21	12.61	35.23	124	213	Average
*10520	57.4	42.81	74	-16.6	37.21	12.61	35.23	124	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
5110.7	53.74	45.54	74	-20.26	34.09	8.1	33.99	140	359	Peak
5145.8	42.98	34.73	54	-11.02	34.12	8.13	34	140	359	Average
5300	98.85	90.31			34.24	8.32	34.02	140	359	Average
5300	105.54	97			34.24	8.32	34.02	140	359	Peak
5375.41	43.87	35.21	54	-10.13	34.29	8.41	34.04	140	359	Average
5408.63	54.27	45.55	74	-19.73	34.32	8.44	34.04	140	359	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
5049.05	53.08	45.02	74	-20.92	34.04	8	33.98	247	0	Peak
5147.9	42.77	34.52	54	-11.23	34.12	8.13	34	247	0	Average
5300	99.36	90.82			34.24	8.32	34.02	247	0	Average
5300	106.12	97.58			34.24	8.32	34.02	247	0	Peak
5361.22	44.75	36.11	54	-9.25	34.29	8.38	34.03	247	0	Average
5370.68	55.42	46.75	74	-18.58	34.29	8.41	34.03	247	0	Peak

Remarks:

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

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	97.11	88.53			34.25	8.35	34.02	137	359	Average
5320	104.05	95.47			34.25	8.35	34.02	137	359	Peak
5350	44.49	35.86	54	-9.51	34.28	8.38	34.03	137	359	Average
5350.55	56.37	47.74	74	-17.63	34.28	8.38	34.03	137	359	Peak
10640	46.72	31.99	54	-7.28	37.31	12.71	35.29	137	222	Average
10640	57.38	42.65	74	-16.62	37.31	12.71	35.29	137	222	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	99.46	90.88			34.25	8.35	34.02	154	0	Average
5320	106.68	98.1			34.25	8.35	34.02	154	0	Peak
5350.44	47.24	38.61	54	-6.76	34.28	8.38	34.03	154	0	Average
5358.69	58.32	49.69	74	-15.68	34.28	8.38	34.03	154	0	Peak
10640	46.5	31.77	54	-7.5	37.31	12.71	35.29	139	299	Average
10640	57.4	42.67	74	-16.6	37.31	12.71	35.29	139	299	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
5450.64	55.19	46.37	74	-18.81	34.36	8.51	34.05	221	39	Peak
5453.52	44.5	35.68	54	-9.5	34.36	8.51	34.05	221	39	Average
*5468.08	56.44	47.61	74	-17.56	34.37	8.51	34.05	221	39	Peak
*5470.64	45.31	36.48	54	-8.69	34.37	8.51	34.05	221	39	Average
5500	97.54	88.62			34.4	8.57	34.05	221	39	Average
5500	104.37	95.45			34.4	8.57	34.05	221	39	Peak
11000	47.73	32.65	54	-6.27	37.6	12.96	35.48	153	62	Average
11000	56.26	41.18	74	-17.74	37.6	12.96	35.48	153	62	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
5455.44	45.79	36.97	54	-8.21	34.36	8.51	34.05	130	5	Average
5457.52	56.36	47.54	74	-17.64	34.36	8.51	34.05	130	5	Peak
*5469.68	47.04	38.21	54	-6.96	34.37	8.51	34.05	130	5	Average
*5470.96	57.13	48.27	74	-16.87	34.37	8.54	34.05	130	5	Peak
5500	100.5	91.58			34.4	8.57	34.05	130	5	Average
5500	107.03	98.11			34.4	8.57	34.05	130	5	Peak
11000	47.85	32.77	54	-6.15	37.6	12.96	35.48	117	139	Average
11000	56.74	41.66	74	-17.26	37.6	12.96	35.48	117	139	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
5422	43.46	34.69	54	-10.54	34.33	8.48	34.04	215	39	Average
5459.92	53.72	44.9	74	-20.28	34.36	8.51	34.05	215	39	Peak
*5468.72	43.39	34.56	54	-10.61	34.37	8.51	34.05	215	39	Average
*5469.2	52.98	44.15	74	-21.02	34.37	8.51	34.05	215	39	Peak
5580	97.75	88.76			34.47	8.6	34.08	215	39	Average
5580	104.31	95.32			34.47	8.6	34.08	215	39	Peak
*5724.2	53.08	43.92	74	-20.92	34.62	8.65	34.11	215	39	Peak
*5725.72	43.41	34.25	54	-10.59	34.62	8.65	34.11	215	39	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
5429.36	43.46	34.67	54	-10.54	34.35	8.48	34.04	116	5	Average
5457.04	53.8	44.98	74	-20.2	34.36	8.51	34.05	116	5	Peak
*5469.04	52.98	44.15	74	-21.02	34.37	8.51	34.05	116	5	Peak
*5470.96	43.66	34.8	54	-10.34	34.37	8.54	34.05	116	5	Average
5580	100.26	91.27			34.47	8.6	34.08	116	5	Average
5580	107.08	98.09			34.47	8.6	34.08	116	5	Peak
*5724.28	52.73	43.57	74	-21.27	34.62	8.65	34.11	116	5	Peak
*5725.64	43.57	34.41	54	-10.43	34.62	8.65	34.11	116	5	Average

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: 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	96.88	87.75			34.59	8.64	34.1	206	39	Average
5700	104.14	95.01			34.59	8.64	34.1	206	39	Peak
*5724.12	47.41	38.25	54	-6.59	34.62	8.65	34.11	206	39	Average
*5725.56	64.71	55.55	74	-9.29	34.62	8.65	34.11	206	39	Peak
11400	48.26	33.16	54	-5.74	37.84	12.67	35.41	142	108	Average
11400	57.03	41.93	74	-16.97	37.84	12.67	35.41	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
5700	100.26	91.13			34.59	8.64	34.1	125	3	Average
5700	106.8	97.67			34.59	8.64	34.1	125	3	Peak
*5724.76	49.69	40.53	54	-4.31	34.62	8.65	34.11	125	3	Average
*5724.76	69.32	60.16	74	-4.68	34.62	8.65	34.11	125	3	Peak
11400	48.54	33.44	54	-5.46	37.84	12.67	35.41	169	225	Average
11400	57.26	42.16	74	-16.74	37.84	12.67	35.41	169	225	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 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	96.48	87.29			34.64	8.66	34.11	207	40	Average
5745	103.68	94.49			34.64	8.66	34.11	207	40	Peak
11490	47.26	32.14	54	-6.74	37.89	12.62	35.39	147	103	Average
11490	56.78	41.66	74	-17.22	37.89	12.62	35.39	147	103	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	100.3	91.11			34.64	8.66	34.11	130	360	Average
5745	107.6	98.41			34.64	8.66	34.11	130	360	Peak
11490	47.64	32.52	54	-6.36	37.89	12.62	35.39	113	238	Average
11490	57.68	42.56	74	-16.32	37.89	12.62	35.39	113	238	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5517.325	43.75	34.82	54	-10.25	34.42	8.57	34.06	207	40	Average
*5517.325	54.42	45.49	74	-19.58	34.42	8.57	34.06	207	40	Peak
5654.35	52.73	43.64	76.71	-23.98	34.56	8.63	34.1	207	40	Peak
5920.525	52.12	42.74	76.79	-24.67	34.81	8.73	34.16	207	40	Peak
*5973.55	44.43	34.97	54	-9.57	34.88	8.75	34.17	207	40	Average
*5973.55	53.72	44.26	74	-20.28	34.88	8.75	34.17	207	40	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	44	34.95	54	-10	34.52	8.61	34.08	130	360	Average
*5619.7	54.58	45.53	74	-19.42	34.52	8.61	34.08	130	360	Peak
5653.825	53.52	44.43	76.39	-22.87	34.56	8.63	34.1	130	360	Peak
5920	52.24	42.86	77.12	-24.88	34.81	8.73	34.16	130	360	Peak
*5943.625	44.36	34.93	54	-9.64	34.85	8.74	34.16	130	360	Average
*5943.625	53.97	44.54	74	-20.03	34.85	8.74	34.16	130	360	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	96.36	87.13			34.68	8.68	34.13	207	40	Average
5785	103.39	94.16			34.68	8.68	34.13	207	40	Peak
11570	47.3	31.99	54	-6.7	38	12.68	35.37	183	96	Average
11570	57.48	42.17	74	-16.52	38	12.68	35.37	183	96	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	100.42	91.19			34.68	8.68	34.13	130	360	Average
5785	107	97.77			34.68	8.68	34.13	130	360	Peak
11570	47.42	32.11	54	-6.58	38	12.68	35.37	115	270	Average
11570	56.48	41.17	74	-17.52	38	12.68	35.37	115	270	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
*5596.075	43.78	34.77	54	-10.22	34.49	8.6	34.08	207	40	Average
*5596.075	54.84	45.83	74	-19.16	34.49	8.6	34.08	207	40	Peak
5653.825	52.52	43.43	76.39	-23.87	34.56	8.63	34.1	207	40	Peak
5923.675	50.7	41.3	74.83	-24.13	34.83	8.73	34.16	207	40	Peak
*6001.375	44.45	34.96	54	-9.55	34.9	8.76	34.17	207	40	Average
*6001.375	54.37	44.88	74	-19.63	34.9	8.76	34.17	207	40	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
*5560.9	43.9	34.93	54	-10.1	34.45	8.59	34.07	130	360	Average
*5560.9	54.19	45.22	74	-19.81	34.45	8.59	34.07	130	360	Peak
5657.5	54.2	45.11	78.68	-24.48	34.56	8.63	34.1	130	360	Peak
5923.675	51.73	42.33	74.83	-23.1	34.83	8.73	34.16	130	360	Peak
*6008.725	44.41	34.9	54	-9.59	34.92	8.76	34.17	130	360	Average
*6008.725	54.8	45.29	74	-19.2	34.92	8.76	34.17	130	360	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	96.66	87.37			34.73	8.69	34.13	207	40	Average
5825	103.79	94.5			34.73	8.69	34.13	207	40	Peak
11650	47.52	31.99	54	-6.48	38.09	12.8	35.36	119	258	Average
11650	57.33	41.8	74	-16.67	38.09	12.8	35.36	119	258	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	100.11	90.82			34.73	8.69	34.13	130	360	Average
5825	107.21	97.92			34.73	8.69	34.13	130	360	Peak
11650	47.56	32.03	54	-6.44	38.09	12.8	35.36	119	246	Average
11650	57.51	41.98	74	-16.49	38.09	12.8	35.36	119	246	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
*5630.725	43.91	34.86	54	-10.09	34.52	8.62	34.09	207	40	Average
*5630.725	54.32	45.27	74	-19.68	34.52	8.62	34.09	207	40	Peak
5661.7	54.33	45.24	81.3	-26.97	34.56	8.63	34.1	207	40	Peak
5923.675	52.89	43.49	74.83	-21.94	34.83	8.73	34.16	207	40	Peak
*5974.6	44.43	34.97	54	-9.57	34.88	8.75	34.17	207	40	Average
*5974.6	53.85	44.39	74	-20.15	34.88	8.75	34.17	207	40	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
*5536.75	43.7	34.76	54	-10.3	34.43	8.58	34.07	130	360	Average
*5536.75	54.27	45.33	74	-19.73	34.43	8.58	34.07	130	360	Peak
5656.45	52.95	43.86	78.02	-25.07	34.56	8.63	34.1	130	360	Peak
5923.15	52.56	43.16	75.15	-22.59	34.83	8.73	34.16	130	360	Peak
*5944.675	44.44	35.01	54	-9.56	34.85	8.74	34.16	130	360	Average
*5944.675	55.57	46.14	74	-18.43	34.85	8.74	34.16	130	360	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

Mode B

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
5147.75	57.88	49.63	74	-16.12	34.12	8.13	34	158	360	Peak
5149.85	46.22	37.97	54	-7.78	34.12	8.13	34	158	360	Average
5180	99.83	91.52			34.15	8.16	34	158	0	Average
5180	106.46	98.15			34.15	8.16	34	158	0	Peak
*10360	46.45	32.15	54	-7.55	37.12	12.3	35.12	112	359	Average
*10360	55.53	41.23	74	-18.47	37.12	12.3	35.12	112	359	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147.3	55.08	46.83	74	-18.92	34.12	8.13	34	182	350	Peak
5149.7	44.79	36.54	54	-9.21	34.12	8.13	34	182	350	Average
5180	98.31	90			34.15	8.16	34	182	350	Average
5180	105.98	97.67			34.15	8.16	34	182	350	Peak
*10360	46.55	32.25	54	-7.45	37.12	12.3	35.12	124	212	Average
*10360	55.59	41.29	74	-18.41	37.12	12.3	35.12	124	212	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
5143.7	43.9	35.64	54	-10.1	34.12	8.13	33.99	158	360	Average
5147.6	54.07	45.82	74	-19.93	34.12	8.13	34	158	360	Peak
5220	99.85	91.46			34.17	8.22	34	158	360	Average
5220	106.8	98.41			34.17	8.22	34	158	360	Peak
5369.03	43.26	34.59	54	-10.74	34.29	8.41	34.03	158	360	Average
5445.92	54.19	45.36	74	-19.81	34.36	8.51	34.04	158	360	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
5063.3	54.37	46.27	74	-19.63	34.05	8.03	33.98	182	350	Peak
5144.9	43.4	35.15	54	-10.6	34.12	8.13	34	182	350	Average
5220	98.75	90.36			34.17	8.22	34	182	350	Average
5220	105.36	96.97			34.17	8.22	34	182	350	Peak
5370.02	43.55	34.88	54	-10.45	34.29	8.41	34.03	182	350	Average
5456.15	53.92	45.1	74	-20.08	34.36	8.51	34.05	182	350	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	99.36	90.92			34.19	8.26	34.01	158	360	Average
5240	106.01	97.57			34.19	8.26	34.01	158	360	Peak
5368.7	53.72	45.05	74	-20.28	34.29	8.41	34.03	158	360	Peak
5391.91	43.14	34.46	54	-10.86	34.31	8.41	34.04	158	360	Average
*10480	46.51	32	54	-7.49	37.19	12.53	35.21	105	119	Average
*10480	56.32	41.81	74	-17.68	37.19	12.53	35.21	105	119	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	98.49	90.05			34.19	8.26	34.01	182	350	Average
5240	105.13	96.69			34.19	8.26	34.01	182	350	Peak
5392.24	43.63	34.95	54	-10.37	34.31	8.41	34.04	182	350	Average
5406.1	54.22	45.5	74	-19.78	34.32	8.44	34.04	182	350	Peak
*10480	47.07	32.56	54	-6.93	37.19	12.53	35.21	103	313	Average
*10480	56.33	41.82	74	-17.67	37.19	12.53	35.21	103	313	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
5144	42.99	34.74	54	-11.01	34.12	8.13	34	162	360	Average
5148.8	53.59	45.34	74	-20.41	34.12	8.13	34	162	360	Peak
5260	98.04	89.58			34.21	8.26	34.01	162	360	Average
5260	105.68	97.22			34.21	8.26	34.01	162	360	Peak
*10520	47.15	32.56	54	-6.85	37.21	12.61	35.23	137	213	Average
*10520	56.75	42.16	74	-17.25	37.21	12.61	35.23	137	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
5145.8	53.32	45.07	74	-20.68	34.12	8.13	34	187	360	Peak
5148.35	43	34.75	54	-11	34.12	8.13	34	187	360	Average
5260	97.64	89.18			34.21	8.26	34.01	187	360	Average
5260	104.26	95.8			34.21	8.26	34.01	187	360	Peak
*10520	46.82	32.23	54	-7.18	37.21	12.61	35.23	126	9	Average
*10520	56.63	42.04	74	-17.37	37.21	12.61	35.23	126	9	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
5107.85	53.28	45.08	74	-20.72	34.09	8.1	33.99	162	360	Peak
5147.15	42.92	34.67	54	-11.08	34.12	8.13	34	162	360	Average
5300	98.74	90.2			34.24	8.32	34.02	162	360	Average
5300	105.6	97.06			34.24	8.32	34.02	162	360	Peak
5370.79	43.28	34.61	54	-10.72	34.29	8.41	34.03	162	360	Average
5386.08	54.94	46.26	74	-19.06	34.31	8.41	34.04	162	360	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
5143.7	42.84	34.58	54	-11.16	34.12	8.13	33.99	187	360	Average
5148.05	53.65	45.4	74	-20.35	34.12	8.13	34	187	360	Peak
5300	97.11	88.57			34.24	8.32	34.02	187	360	Average
5300	104.77	96.23			34.24	8.32	34.02	187	360	Peak
5357.59	43.76	35.13	54	-10.24	34.28	8.38	34.03	187	360	Average
5380.8	54.71	46.03	74	-19.29	34.31	8.41	34.04	187	360	Peak

Remarks:

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

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	98.63	90.05			34.25	8.35	34.02	151	360	Average
5320	105.41	96.83			34.25	8.35	34.02	151	360	Peak
5350.22	44.15	35.52	54	-9.85	34.28	8.38	34.03	151	360	Average
5350.66	63.42	54.79	74	-10.58	34.28	8.38	34.03	151	360	Peak
10640	47.05	32.32	54	-6.95	37.31	12.71	35.29	131	358	Average
10640	55.92	41.19	74	-18.08	37.31	12.71	35.29	131	358	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5320	97.19	88.61			34.25	8.35	34.02	187	360	Average
5320	104.22	95.64			34.25	8.35	34.02	187	360	Peak
5350.44	58.11	49.48	74	-15.89	34.28	8.38	34.03	187	360	Peak
5350.77	44.44	35.81	54	-9.56	34.28	8.38	34.03	187	360	Average
10640	47.13	32.4	54	-6.87	37.31	12.71	35.29	103	310	Average
10640	56.42	41.69	74	-17.58	37.31	12.71	35.29	103	310	Peak

Remarks:

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

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
5453.52	55.67	46.85	74	-18.33	34.36	8.51	34.05	182	24	Peak
5458.64	45.94	37.12	54	-8.06	34.36	8.51	34.05	182	24	Average
*5470.48	46.99	38.16	54	-7.01	34.37	8.51	34.05	182	24	Average
*5470.96	58.74	49.88	74	-15.26	34.37	8.54	34.05	182	24	Peak
5500	97	88.08			34.4	8.57	34.05	157	0	Average
5500	104.54	95.62			34.4	8.57	34.05	157	0	Peak
11000	47.75	32.67	54	-6.25	37.6	12.96	35.48	127	204	Average
11000	57.06	41.98	74	-16.94	37.6	12.96	35.48	127	204	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5451.12	58.32	49.5	74	-15.68	34.36	8.51	34.05	156	2	Peak
5459.44	47.37	38.55	54	-6.63	34.36	8.51	34.05	156	2	Average
*5470.48	60.88	52.05	74	-13.12	34.37	8.51	34.05	156	2	Peak
*5470.96	48.61	39.75	54	-5.39	34.37	8.54	34.05	156	2	Average
5500	101.78	92.86			34.4	8.57	34.05	142	2	Average
5500	108.37	99.45			34.4	8.57	34.05	142	2	Peak
11000	47.63	32.55	54	-6.37	37.6	12.96	35.48	162	49	Average
11000	56.59	41.51	74	-17.41	37.6	12.96	35.48	162	49	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: 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
5424.56	54.45	45.68	74	-19.55	34.33	8.48	34.04	129	36	Peak
5429.68	43.21	34.42	54	-10.79	34.35	8.48	34.04	129	36	Average
*5468.72	53.44	44.61	74	-20.56	34.37	8.51	34.05	129	36	Peak
*5469.36	43.11	34.28	54	-10.89	34.37	8.51	34.05	129	36	Average
5580	97.24	88.25			34.47	8.6	34.08	138	14	Average
5580	104.48	95.49			34.47	8.6	34.08	138	14	Peak
*5725.8	43.16	34	54	-10.84	34.62	8.65	34.11	129	36	Average
*5726.04	53.28	44.12	74	-20.72	34.62	8.65	34.11	129	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
5353.04	43.91	35.28	54	-10.09	34.28	8.38	34.03	173	8	Average
5421.04	54.32	45.55	74	-19.68	34.33	8.48	34.04	173	8	Peak
*5468.56	53.28	44.45	74	-20.72	34.37	8.51	34.05	173	8	Peak
*5468.88	43.26	34.43	54	-10.74	34.37	8.51	34.05	173	8	Average
5580	100.87	91.88			34.47	8.6	34.08	148	4	Average
5580	108.34	99.35			34.47	8.6	34.08	148	4	Peak
*5725.72	43.24	34.08	54	-10.76	34.62	8.65	34.11	173	8	Average
*5726.04	52.95	43.79	74	-21.05	34.62	8.65	34.11	173	8	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	96.52	87.39			34.59	8.64	34.1	150	13	Average
5700	103.75	94.62			34.59	8.64	34.1	150	13	Peak
*5724.28	45.47	36.31	54	-8.53	34.62	8.65	34.11	138	9	Average
*5725.32	53.93	44.77	74	-20.07	34.62	8.65	34.11	138	9	Peak
11400	47.27	32.17	54	-6.73	37.84	12.67	35.41	196	75	Average
11400	56.21	41.11	74	-17.79	37.84	12.67	35.41	196	75	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	101.7	92.57			34.59	8.64	34.1	125	2	Average
5700	108.33	99.2			34.59	8.64	34.1	125	2	Peak
*5724.2	47.8	38.64	54	-6.2	34.62	8.65	34.11	132	2	Average
*5725.24	63.15	53.99	74	-10.85	34.62	8.65	34.11	132	2	Peak
11400	47.86	32.76	54	-6.14	37.84	12.67	35.41	160	254	Average
11400	56.93	41.83	74	-17.07	37.84	12.67	35.41	160	254	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 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	95.15	85.96			34.64	8.66	34.11	131	6	Average
5745	102.38	93.19			34.64	8.66	34.11	131	6	Peak
11490	47.87	32.75	54	-6.13	37.89	12.62	35.39	156	328	Average
11490	57.02	41.9	74	-16.98	37.89	12.62	35.39	156	328	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	100.75	91.56			34.64	8.66	34.11	130	5	Average
5745	107.61	98.42			34.64	8.66	34.11	130	5	Peak
11490	47.89	32.77	54	-6.11	37.89	12.62	35.39	105	85	Average
11490	56.44	41.32	74	-17.56	37.89	12.62	35.39	105	85	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5640.7	43.9	34.83	54	-10.1	34.54	8.62	34.09	131	6	Average
*5640.7	54.29	45.22	74	-19.71	34.54	8.62	34.09	131	6	Peak
5651.2	53.8	44.71	74.75	-20.95	34.56	8.62	34.09	131	6	Peak
5923.675	51.98	42.58	74.83	-22.85	34.83	8.73	34.16	131	6	Peak
*5941	44.29	34.86	54	-9.71	34.85	8.74	34.16	131	6	Average
*5941	53.53	44.1	74	-20.47	34.85	8.74	34.16	131	6	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
*5647	44.01	34.94	54	-9.99	34.54	8.62	34.09	130	5	Average
*5647	53.7	44.63	74	-20.3	34.54	8.62	34.09	130	5	Peak
5650.675	53.82	44.73	74.42	-20.6	34.56	8.62	34.09	130	5	Peak
5924.2	52.66	43.26	74.5	-21.84	34.83	8.73	34.16	130	5	Peak
*5962	44.4	34.96	54	-9.6	34.87	8.74	34.17	130	5	Average
*5962	54.65	45.21	74	-19.35	34.87	8.74	34.17	130	5	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	95.6	86.37			34.68	8.68	34.13	131	6	Average
5785	102.6	93.37			34.68	8.68	34.13	131	6	Peak
11570	47.96	32.65	54	-6.04	38	12.68	35.37	137	195	Average
11570	56.59	41.28	74	-17.41	38	12.68	35.37	137	195	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	100.44	91.21			34.68	8.68	34.13	130	5	Average
5785	107.12	97.89			34.68	8.68	34.13	130	5	Peak
11570	47.99	32.68	54	-6.01	38	12.68	35.37	136	280	Average
11570	57.14	41.83	74	-16.86	38	12.68	35.37	136	280	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
*5556.175	43.73	34.76	54	-10.27	34.45	8.59	34.07	130	16	Average
*5556.175	53.75	44.78	74	-20.25	34.45	8.59	34.07	130	16	Peak
5651.725	52.83	43.74	75.08	-22.25	34.56	8.62	34.09	130	16	Peak
5924.2	52.46	43.06	74.5	-22.04	34.83	8.73	34.16	130	16	Peak
*5981.95	44.29	34.83	54	-9.71	34.88	8.75	34.17	130	16	Average
*5981.95	53.98	44.52	74	-20.02	34.88	8.75	34.17	130	16	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
*5618.125	43.91	34.86	54	-10.09	34.52	8.61	34.08	130	5	Average
*5618.125	54.7	45.65	74	-19.3	34.52	8.61	34.08	130	5	Peak
5652.25	52.77	43.68	75.4	-22.63	34.56	8.62	34.09	130	5	Peak
5922.625	52.59	43.19	75.48	-22.89	34.83	8.73	34.16	130	5	Peak
*5964.1	44.37	34.93	54	-9.63	34.87	8.74	34.17	130	5	Average
*5964.1	54.11	44.67	74	-19.89	34.87	8.74	34.17	130	5	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	95.72	86.43			34.73	8.69	34.13	131	6	Average
5825	102.49	93.2			34.73	8.69	34.13	131	6	Peak
11650	48	32.47	54	-6	38.09	12.8	35.36	130	99	Average
11650	56.63	41.1	74	-17.37	38.09	12.8	35.36	130	99	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	100.33	91.04			34.73	8.69	34.13	130	5	Average
5825	107.19	97.9			34.73	8.69	34.13	130	5	Peak
11650	48.08	32.55	54	-5.92	38.09	12.8	35.36	145	222	Average
11650	56.56	41.03	74	-17.44	38.09	12.8	35.36	145	222	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5616.55	43.85	34.8	54	-10.15	34.52	8.61	34.08	131	6	Average
*5616.55	54.44	45.39	74	-19.56	34.52	8.61	34.08	131	6	Peak
5655.4	51.86	42.77	77.37	-25.51	34.56	8.63	34.1	131	6	Peak
5923.675	53.56	44.16	74.83	-21.27	34.83	8.73	34.16	131	6	Peak
*6012.925	44.33	34.83	54	-9.67	34.92	8.76	34.18	131	6	Average
*6012.925	53.54	44.04	74	-20.46	34.92	8.76	34.18	131	6	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
*5523.1	43.89	34.95	54	-10.11	34.42	8.58	34.06	130	5	Average
*5523.1	54.41	45.47	74	-19.59	34.42	8.58	34.06	130	5	Peak
5653.3	51.87	42.77	76.06	-24.19	34.56	8.63	34.09	130	5	Peak
5923.15	53.51	44.11	75.15	-21.64	34.83	8.73	34.16	130	5	Peak
*6015.025	44.5	35	54	-9.5	34.92	8.76	34.18	130	5	Average
*6015.025	54.58	45.08	74	-19.42	34.92	8.76	34.18	130	5	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
5148.35	55.22	46.97	74	-18.78	34.12	8.13	34	156	358	Peak
5150	47.43	39.18	54	-6.57	34.12	8.13	34	156	358	Average
5190	96.45	88.11			34.15	8.19	34	156	359	Average
5190	103.18	94.84			34.15	8.19	34	156	359	Peak
5442.18	53.37	44.58	74	-20.63	34.35	8.48	34.04	156	359	Peak
5452.19	43.2	34.38	54	-10.8	34.36	8.51	34.05	156	359	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
5148.65	54.47	46.22	74	-19.53	34.12	8.13	34	196	352	Peak
5149.85	46.81	38.56	54	-7.19	34.12	8.13	34	196	352	Average
5190	95.3	86.96			34.15	8.19	34	182	350	Average
5190	102.41	94.07			34.15	8.19	34	182	350	Peak
5370.24	53.81	45.14	74	-20.19	34.29	8.41	34.03	182	350	Peak
5429.42	43.43	34.64	54	-10.57	34.35	8.48	34.04	182	350	Average

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 46	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	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
5142.05	53.87	45.61	74	-20.13	34.12	8.13	33.99	156	359	Peak
5142.65	43.62	35.36	54	-10.38	34.12	8.13	33.99	156	359	Average
5230	96.17	87.77			34.19	8.22	34.01	156	359	Average
5230	103.45	95.05			34.19	8.22	34.01	156	359	Peak
5350	43.43	34.8	54	-10.57	34.28	8.38	34.03	156	359	Average
5433.27	54.01	45.22	74	-19.99	34.35	8.48	34.04	156	359	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
5139.8	54.64	46.38	74	-19.36	34.12	8.13	33.99	172	7	Peak
5146.55	43.57	35.32	54	-10.43	34.12	8.13	34	172	7	Average
5230	95.65	87.25			34.19	8.22	34.01	172	7	Average
5230	102.55	94.15			34.19	8.22	34.01	172	7	Peak
5426.34	53.98	45.21	74	-20.02	34.33	8.48	34.04	172	7	Peak
5453.84	43.68	34.86	54	-10.32	34.36	8.51	34.05	172	7	Average

Remarks:

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

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
5050.1	54.64	46.58	74	-19.36	34.04	8	33.98	162	360	Peak
5108.9	43.36	35.16	54	-10.64	34.09	8.1	33.99	162	360	Average
5270	95.63	87.14			34.21	8.29	34.01	162	360	Average
5270	102.7	94.21			34.21	8.29	34.01	162	360	Peak
5366.39	43.82	35.18	54	-10.18	34.29	8.38	34.03	162	360	Average
5376.07	55.41	46.75	74	-18.59	34.29	8.41	34.04	162	360	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
5091.2	43.23	35.06	54	-10.77	34.08	8.07	33.98	187	360	Average
5144	54.41	46.16	74	-19.59	34.12	8.13	34	187	360	Peak
5270	94.55	86.06			34.21	8.29	34.01	187	360	Average
5270	101.46	92.97			34.21	8.29	34.01	187	360	Peak
5350.33	43.81	35.18	54	-10.19	34.28	8.38	34.03	187	360	Average
5350.44	54.01	45.38	74	-19.99	34.28	8.38	34.03	187	360	Peak

Remarks:

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

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
5133.8	53.73	45.48	74	-20.27	34.11	8.13	33.99	160	360	Peak
5142.95	43.33	35.07	54	-10.67	34.12	8.13	33.99	160	360	Average
5310	95.47	86.92			34.25	8.32	34.02	160	360	Average
5310	102.18	93.63			34.25	8.32	34.02	160	360	Peak
5350.66	45.55	36.92	54	-8.45	34.28	8.38	34.03	160	0	Average
5355.39	57.13	48.5	74	-16.87	34.28	8.38	34.03	160	0	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5144.9	43.28	35.03	54	-10.72	34.12	8.13	34	187	0	Average
5146.4	54.07	45.82	74	-19.93	34.12	8.13	34	187	0	Peak
5310	94.73	86.18			34.25	8.32	34.02	187	0	Average
5310	101.08	92.53			34.25	8.32	34.02	187	0	Peak
5350.44	45.83	37.2	54	-8.17	34.28	8.38	34.03	187	0	Average
5351.43	55.12	46.49	74	-18.88	34.28	8.38	34.03	187	0	Peak

Remarks:

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

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
5455.12	54.34	45.52	74	-19.66	34.36	8.51	34.05	157	26	Peak
5459.12	43.95	35.13	54	-10.05	34.36	8.51	34.05	157	26	Average
*5470	57.29	48.46	74	-16.71	34.37	8.51	34.05	157	26	Peak
*5470.64	46.31	37.48	54	-7.69	34.37	8.51	34.05	157	26	Average
5510	95.08	86.17			34.4	8.57	34.06	138	15	Average
5510	102.31	93.4			34.4	8.57	34.06	138	15	Peak
*5724.68	52.52	43.36	74	-21.48	34.62	8.65	34.11	157	26	Peak
*5725.56	43.11	33.95	54	-10.89	34.62	8.65	34.11	157	26	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
5420.4	54.73	45.96	74	-19.27	34.33	8.48	34.04	106	18	Peak
5460	45.3	36.48	54	-8.7	34.36	8.51	34.05	106	18	Average
*5470.64	59.5	50.67	74	-14.5	34.37	8.51	34.05	106	18	Peak
*5470.8	48.22	39.36	54	-5.78	34.37	8.54	34.05	106	18	Average
5510	98.32	89.41			34.4	8.57	34.06	130	5	Average
5510	105.26	96.35			34.4	8.57	34.06	130	5	Peak
*5724.04	53.14	43.98	74	-20.86	34.62	8.65	34.11	106	18	Peak
*5724.44	43.28	34.12	54	-10.72	34.62	8.65	34.11	106	18	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
5385.84	54.32	45.64	74	-19.68	34.31	8.41	34.04	164	28	Peak
5459.92	43.75	34.93	54	-10.25	34.36	8.51	34.05	164	28	Average
*5468.24	44.12	35.29	54	-9.88	34.37	8.51	34.05	164	28	Average
*5469.04	53.24	44.41	74	-20.76	34.37	8.51	34.05	164	28	Peak
5550	95.3	86.33			34.45	8.59	34.07	137	5	Average
5550	102.94	93.97			34.45	8.59	34.07	137	5	Peak
*5725.08	52.67	43.51	74	-21.33	34.62	8.65	34.11	164	28	Peak
*5725.24	42.93	33.77	54	-11.07	34.62	8.65	34.11	164	28	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
5391.28	53.98	45.3	74	-20.02	34.31	8.41	34.04	190	11	Peak
5458.8	44.07	35.25	54	-9.93	34.36	8.51	34.05	190	11	Average
*5469.04	53.98	45.15	74	-20.02	34.37	8.51	34.05	190	11	Peak
*5470.48	44.48	35.65	54	-9.52	34.37	8.51	34.05	190	11	Average
5550	97.08	88.11			34.45	8.59	34.07	142	14	Average
5550	105.1	96.13			34.45	8.59	34.07	142	14	Peak
*5725.64	53.03	43.87	74	-20.97	34.62	8.65	34.11	190	11	Peak
*5725.96	43.12	33.96	54	-10.88	34.62	8.65	34.11	190	11	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
5437.52	54.8	46.01	74	-19.2	34.35	8.48	34.04	150	13	Peak
5447.76	43.73	34.9	54	-10.27	34.36	8.51	34.04	148	23	Average
*5469.68	43.19	34.36	54	-10.81	34.37	8.51	34.05	148	23	Average
*5470	52.23	43.4	74	-21.77	34.37	8.51	34.05	150	13	Peak
5670	94.94	85.84			34.57	8.63	34.1	150	13	Average
5670	103.08	93.98			34.57	8.63	34.1	150	13	Peak
*5724.6	44.33	35.17	54	-9.67	34.62	8.65	34.11	148	23	Average
*5724.84	53.08	43.92	74	-20.92	34.62	8.65	34.11	148	23	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
5441.84	54.05	45.26	74	-19.95	34.35	8.48	34.04	130	18	Peak
5447.28	43.98	35.15	54	-10.02	34.36	8.51	34.04	130	18	Average
*5469.04	52	43.17	74	-22	34.37	8.51	34.05	130	18	Peak
*5470.64	43.43	34.6	54	-10.57	34.37	8.51	34.05	130	18	Average
5670	99.12	90.02			34.57	8.63	34.1	126	4	Average
5670	107.21	98.11			34.57	8.63	34.1	126	4	Peak
*5724.04	53.55	44.39	74	-20.45	34.62	8.65	34.11	130	18	Peak
*5724.12	45.41	36.25	54	-8.59	34.62	8.65	34.11	130	18	Average

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	93.44	84.23			34.66	8.66	34.11	131	6	Average
5755	100.79	91.58			34.66	8.66	34.11	131	6	Peak
11510	48.11	33	54	-5.89	37.9	12.6	35.39	137	126	Average
11510	56.64	41.53	74	-17.36	37.9	12.6	35.39	137	126	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	98.33	89.12			34.66	8.66	34.11	130	5	Average
5755	105.4	96.19			34.66	8.66	34.11	130	5	Peak
11510	48.07	32.96	54	-5.93	37.9	12.6	35.39	128	62	Average
11510	56.32	41.21	74	-17.68	37.9	12.6	35.39	128	62	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
*5592.925	45.1	36.09	54	-8.9	34.49	8.6	34.08	131	6	Average
*5592.925	54.39	45.38	74	-19.61	34.49	8.6	34.08	131	6	Peak
5655.925	53.36	44.27	77.7	-24.34	34.56	8.63	34.1	131	6	Peak
5922.625	52.25	42.85	75.48	-23.23	34.83	8.73	34.16	131	6	Peak
*5956.75	45.5	36.05	54	-8.5	34.87	8.74	34.16	131	6	Average
*5956.75	54.71	45.26	74	-19.29	34.87	8.74	34.16	131	6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5622.325	45.23	36.18	54	-8.77	34.52	8.61	34.08	130	5	Average
*5622.325	53.88	44.83	74	-20.12	34.52	8.61	34.08	130	5	Peak
5654.875	53.14	44.05	77.04	-23.9	34.56	8.63	34.1	130	5	Peak
5918.425	51.97	42.59	78.1	-26.13	34.81	8.73	34.16	130	5	Peak
*5988.775	45.63	36.17	54	-8.37	34.88	8.75	34.17	130	5	Average
*5988.775	55.04	45.58	74	-18.96	34.88	8.75	34.17	130	5	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
5795	93.25	84.01			34.69	8.68	34.13	131	6	Average
5795	100.83	91.59			34.69	8.68	34.13	131	6	Peak
11590	48.39	33.02	54	-5.61	38.02	12.72	35.37	167	302	Average
11590	56.42	41.05	74	-17.58	38.02	12.72	35.37	167	302	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	98.44	89.2			34.69	8.68	34.13	130	5	Average
5795	105.64	96.4			34.69	8.68	34.13	130	5	Peak
11590	48.36	32.99	54	-5.64	38.02	12.72	35.37	148	202	Average
11590	58.64	43.27	74	-15.36	38.02	12.72	35.37	148	202	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
*5561.425	44.89	35.92	54	-9.11	34.45	8.59	34.07	131	6	Average
*5561.425	54.4	45.43	74	-19.6	34.45	8.59	34.07	131	6	Peak
5653.3	53.41	44.31	76.06	-22.65	34.56	8.63	34.09	131	6	Peak
5922.625	51.58	42.18	75.48	-23.9	34.83	8.73	34.16	131	6	Peak
*6016.075	45.42	35.92	54	-8.58	34.92	8.76	34.18	131	6	Average
*6016.075	54.11	44.61	74	-19.89	34.92	8.76	34.18	131	6	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
*5641.75	44.95	35.88	54	-9.05	34.54	8.62	34.09	130	5	Average
*5641.75	54.19	45.12	74	-19.81	34.54	8.62	34.09	130	5	Peak
5654.35	54.75	45.66	76.71	-21.96	34.56	8.63	34.1	130	5	Peak
5921.575	52.76	43.36	76.14	-23.38	34.83	8.73	34.16	130	5	Peak
*5931.55	45.52	36.12	54	-8.48	34.83	8.73	34.16	130	5	Average
*5931.55	54.33	44.93	74	-19.67	34.83	8.73	34.16	130	5	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
5127.5	49.75	41.53	54	-4.25	34.11	8.1	33.99	137	359	Average
5147.15	59.03	50.78	74	-14.97	34.12	8.13	34	137	359	Peak
5210	94.21	85.85			34.17	8.19	34	136	359	Average
5210	101.19	92.83			34.17	8.19	34	136	359	Peak
5364.63	43.81	35.17	54	-10.19	34.29	8.38	34.03	136	359	Average
5408.96	54.07	45.35	74	-19.93	34.32	8.44	34.04	136	359	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147	50.25	42	54	-3.75	34.12	8.13	34	190	356	Average
5147	58.46	50.21	74	-15.54	34.12	8.13	34	190	356	Peak
5210	93.45	85.09			34.17	8.19	34	196	352	Average
5210	100	91.64			34.17	8.19	34	196	352	Peak
5356.38	43.55	34.92	54	-10.45	34.28	8.38	34.03	196	352	Average
5427.22	53.48	44.71	74	-20.52	34.33	8.48	34.04	196	352	Peak

Remarks:

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

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
5140.25	54	45.74	74	-20	34.12	8.13	33.99	152	0	Peak
5150	43.52	35.27	54	-10.48	34.12	8.13	34	152	0	Average
5290	93.04	84.51			34.23	8.32	34.02	152	0	Average
5290	100.78	92.25			34.23	8.32	34.02	152	0	Peak
5350.77	51.17	42.54	54	-2.83	34.28	8.38	34.03	150	360	Average
5367.49	59.76	51.09	74	-14.24	34.29	8.41	34.03	150	360	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
5088.05	53.56	45.4	74	-20.44	34.07	8.07	33.98	187	360	Peak
5120.45	43.37	35.17	54	-10.63	34.09	8.1	33.99	187	360	Average
5290	92.43	83.9			34.23	8.32	34.02	187	360	Average
5290	99.69	91.16			34.23	8.32	34.02	187	360	Peak
5351.87	52.26	43.63	54	-1.74	34.28	8.38	34.03	169	9	Average
5367.6	60.56	51.89	74	-13.44	34.29	8.41	34.03	169	9	Peak

Remarks:

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

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
5448.88	55.73	46.9	74	-18.27	34.36	8.51	34.04	130	5	Peak
5455.92	45.12	36.3	54	-8.88	34.36	8.51	34.05	130	5	Average
*5470.8	55.57	46.71	74	-18.43	34.37	8.54	34.05	130	5	Peak
*5470.96	45.69	36.83	54	-8.31	34.37	8.54	34.05	130	5	Average
5530	90.15	81.22			34.42	8.58	34.07	137	5	Average
5530	98.74	89.81			34.42	8.58	34.07	137	5	Peak
*5724.84	52.35	43.19	74	-21.65	34.62	8.65	34.11	130	5	Peak
*5725.32	43.05	33.89	54	-10.95	34.62	8.65	34.11	130	5	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
5452.88	57.36	48.54	74	-16.64	34.36	8.51	34.05	163	18	Peak
5456.08	48.56	39.74	54	-5.44	34.36	8.51	34.05	163	18	Average
*5468.56	49.03	40.2	54	-4.97	34.37	8.51	34.05	163	18	Average
*5469.36	58.01	49.18	74	-15.99	34.37	8.51	34.05	163	18	Peak
5530	93.13	84.2			34.42	8.58	34.07	129	4	Average
5530	101.92	92.99			34.42	8.58	34.07	129	4	Peak
*5724.36	44.2	35.04	54	-9.8	34.62	8.65	34.11	163	18	Average
*5725.24	53.92	44.76	74	-20.08	34.62	8.65	34.11	163	18	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
5413.52	54.32	45.59	74	-19.68	34.33	8.44	34.04	167	18	Peak
5444.72	43.99	35.2	54	-10.01	34.35	8.48	34.04	167	18	Average
*5470.48	43.84	35.01	54	-10.16	34.37	8.51	34.05	167	18	Average
*5470.64	52.8	43.97	74	-21.2	34.37	8.51	34.05	167	18	Peak
5610	91.82	82.79			34.5	8.61	34.08	138	6	Average
5610	100.5	91.47			34.5	8.61	34.08	138	6	Peak
*5724.52	53.12	43.96	74	-20.88	34.62	8.65	34.11	167	18	Peak
*5725.8	44.11	34.95	54	-9.89	34.62	8.65	34.11	167	18	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
5371.76	44.18	35.51	54	-9.82	34.29	8.41	34.03	141	6	Average
5387.92	54.16	45.48	74	-19.84	34.31	8.41	34.04	141	6	Peak
*5468.08	53.32	44.49	74	-20.68	34.37	8.51	34.05	141	6	Peak
*5468.88	43.8	34.97	54	-10.2	34.37	8.51	34.05	141	6	Average
5610	94.5	85.47			34.5	8.61	34.08	134	4	Average
5610	103.28	94.25			34.5	8.61	34.08	134	4	Peak
*5725.32	53.69	44.53	74	-20.31	34.62	8.65	34.11	141	6	Peak
*5725.88	44.48	35.32	54	-9.52	34.62	8.65	34.11	141	6	Average

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 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	92.42	83.19			34.68	8.67	34.12	131	6	Average
5775	99.75	90.52			34.68	8.67	34.12	131	6	Peak
11550	48.41	33.14	54	-5.59	37.97	12.68	35.38	154	159	Average
11550	57.16	41.89	74	-16.84	37.97	12.68	35.38	154	159	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5775	97.77	88.54			34.68	8.67	34.12	130	5	Average
5775	104.07	94.84			34.68	8.67	34.12	130	5	Peak
11550	48.49	33.22	54	-5.51	37.97	12.68	35.38	131	248	Average
11550	57.32	42.05	74	-16.68	37.97	12.68	35.38	131	248	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5633.875	45.21	36.14	54	-8.79	34.54	8.62	34.09	131	6	Average
*5633.875	53.82	44.75	74	-20.18	34.54	8.62	34.09	131	6	Peak
5653.825	53.61	44.52	76.39	-22.78	34.56	8.63	34.1	131	6	Peak
5920.525	53.55	44.17	76.79	-23.24	34.81	8.73	34.16	131	6	Peak
*5942.05	45.59	36.16	54	-8.41	34.85	8.74	34.16	131	6	Average
*5942.05	53.88	44.45	74	-20.12	34.85	8.74	34.16	131	6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
*5622.325	45.72	36.67	54	-8.28	34.52	8.61	34.08	130	5	Average
*5622.325	54.84	45.79	74	-19.16	34.52	8.61	34.08	130	5	Peak
5652.25	53.31	44.22	75.4	-22.09	34.56	8.62	34.09	130	5	Peak
5921.575	53.29	43.89	76.14	-22.85	34.83	8.73	34.16	130	5	Peak
*5950.975	46.36	36.93	54	-7.64	34.85	8.74	34.16	130	5	Average
*5950.975	55.09	45.66	74	-18.91	34.85	8.74	34.16	130	5	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:

Mode B

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	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
97.5	29.41	50.78	43.5	-14.09	9.5	1.28	32.15	113	154	Peak
178.23	19.44	39.74	43.5	-24.06	10.33	1.61	32.24	178	196	Peak
264.09	26.44	43.2	46	-19.56	13.41	1.94	32.11	120	35	Peak
360.2	29.48	42.96	46	-16.52	16.36	2.26	32.1	154	359	Peak
623.4	25.16	32.3	46	-20.84	22.1	2.93	32.17	162	256	Peak
768.3	27.13	32.62	46	-18.87	23.4	3.22	32.11	176	133	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
31.35	30.27	44.97	40	-9.73	16.82	0.74	32.26	187	74	Peak
96.42	32.52	53.86	43.5	-10.98	9.42	1.28	32.04	154	159	Peak
201.18	21.66	41.35	43.5	-21.84	10.95	1.65	32.29	112	211	Peak
552	31.46	40.63	46	-14.54	20.27	2.76	32.2	159	158	Peak
768.3	30.72	36.21	46	-15.28	23.4	3.22	32.11	136	113	Peak
840.4	27.95	32.72	46	-18.05	23.7	3.38	31.85	184	4	Peak

Remarks:

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

Mode B

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 58	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
95.34	31.79	53.16	43.5	-11.71	9.34	1.28	31.99	187	88	Peak
216.03	25.63	44.67	46	-20.37	11.54	1.65	32.23	106	326	Peak
241.41	24.46	42.09	46	-21.54	12.65	1.85	32.13	154	114	Peak
360.2	29.02	42.5	46	-16.98	16.36	2.26	32.1	193	336	Peak
672.4	27.17	32.84	46	-18.83	23.4	3.05	32.12	174	335	Peak
800.5	31.83	35.97	46	-14.17	24.6	3.32	32.06	187	147	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
31.62	31.86	46.81	40	-8.14	16.57	0.74	32.26	105	165	Peak
93.72	33.97	55.57	43.5	-9.53	9.22	1.11	31.93	124	219	Peak
168.24	23.26	43.83	43.5	-20.24	10.15	1.52	32.24	124	239	Peak
456.1	28.46	39.93	46	-17.54	18.18	2.49	32.14	145	227	Peak
524.7	42.28	51.03	46	-3.72	20.7	2.7	32.15	132	228	Peak
696.2	26.16	32	46	-19.84	23.14	3.11	32.09	100	0	Peak

Remarks:

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

Mode A

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
84.54	24.11	46.37	40	-15.89	8.64	1.11	32.01	113	360	Peak
96.42	30.83	52.17	43.5	-12.67	9.42	1.28	32.04	121	111	Peak
251.4	25.99	43.11	46	-20.01	13.04	1.94	32.1	104	74	Peak
431.6	25.44	37.42	46	-20.56	17.78	2.41	32.17	154	254	Peak
599.6	26.58	34.8	46	-19.42	21.1	2.87	32.19	195	65	Peak
744.5	25.07	30.72	46	-20.93	23.27	3.22	32.14	200	1	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
71.04	28.78	51.75	40	-11.22	8.14	1.11	32.22	170	204	Peak
98.04	31.74	53.07	43.5	-11.76	9.54	1.28	32.15	151	112	Peak
231.42	26.18	44.31	46	-19.82	12.19	1.85	32.17	176	264	Peak
552	31.26	40.43	46	-14.74	20.27	2.76	32.2	199	282	Peak
672.4	28.52	34.19	46	-17.48	23.4	3.05	32.12	181	346	Peak
792.1	30.5	35.07	46	-15.5	24.23	3.27	32.07	150	147	Peak

Remarks:

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

Mode B

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 155	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
96.96	28.93	50.29	43.5	-14.57	9.46	1.28	32.1	196	169	Peak
216.03	26.34	45.38	46	-19.66	11.54	1.65	32.23	134	213	Peak
264.09	26.53	43.29	46	-19.47	13.41	1.94	32.11	164	205	Peak
360.2	29.59	43.07	46	-16.41	16.36	2.26	32.1	115	305	Peak
647.9	24.06	31.12	46	-21.94	22.1	2.99	32.15	146	15	Peak
720	26.81	32.45	46	-19.19	23.31	3.16	32.11	199	198	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
81.3	29.37	51.95	40	-10.63	8.47	1.11	32.16	124	199	Peak
96.69	33.19	54.59	43.5	-10.31	9.42	1.28	32.1	180	190	Peak
251.67	27.43	44.55	46	-18.57	13.04	1.94	32.1	127	274	Peak
456.1	28.91	40.38	46	-17.09	18.18	2.49	32.14	139	335	Peak
720	30.08	35.72	46	-15.92	23.31	3.16	32.11	154	300	Peak
840.4	28.41	33.18	46	-17.59	23.7	3.38	31.85	184	259	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	ESCS 30	100288	Aug. 18, 2016	Aug. 17, 2017
RF signal cable Woken	5D-FB	Cable-cond2-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 17, 2017	Jan. 16, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 26, 2016	Jul. 25, 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 2.

3. The VCCI Site Registration No. is C-2047.

4.2.3 Test Procedures

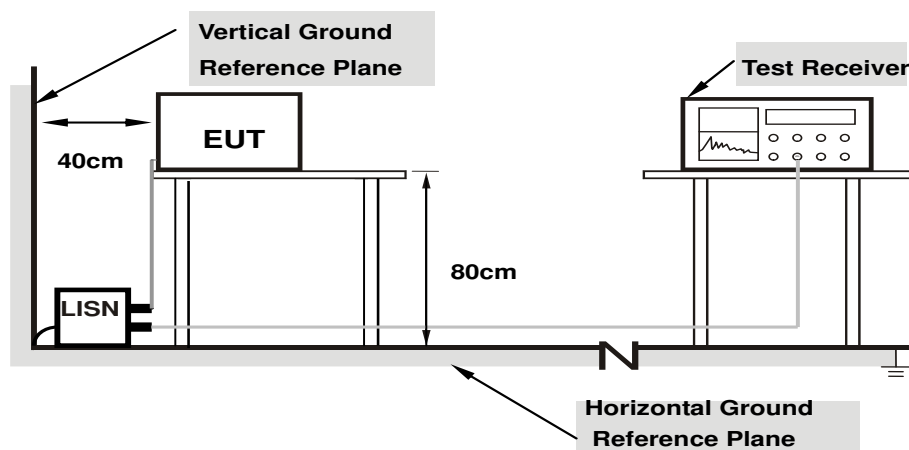
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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:**
- Support units were connected to second LISN.
 - 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

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

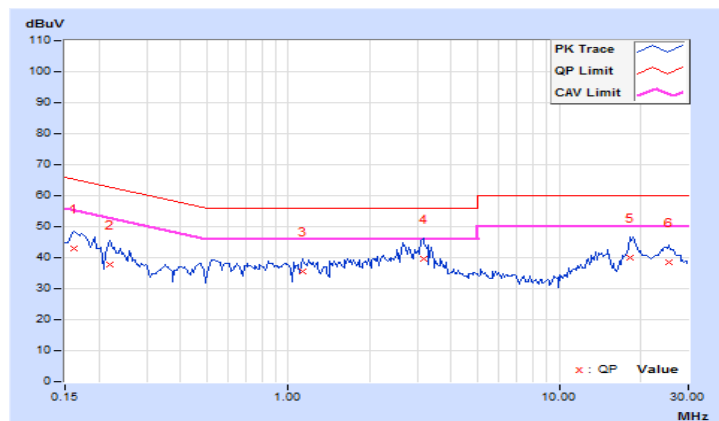
4.2.7 Test Results

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	Toby Tian	Test Date	2017/2/9

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	0.16172	10.02	32.87	21.74	42.89	31.76	65.38	55.38	-22.49	-23.62
2	0.22031	9.92	28.00	19.23	37.92	29.15	62.81	52.81	-24.89	-23.66
3	1.13672	10.00	25.55	17.01	35.55	27.01	56.00	46.00	-20.45	-18.99
4	3.14844	10.00	29.62	18.57	39.62	28.57	56.00	46.00	-16.38	-17.43
5	18.35938	10.30	29.66	24.72	39.96	35.02	60.00	50.00	-20.04	-14.98
6	25.44922	10.27	28.15	23.71	38.42	33.98	60.00	50.00	-21.58	-16.02

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

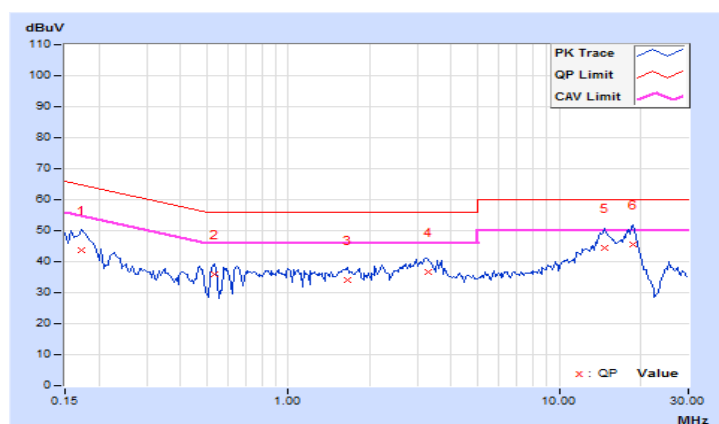


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Toby Tian	Test Date	2017/2/9

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	0.17344	9.84	33.95	23.36	43.79	33.20	64.79	54.79	-21.00	-21.59
2	0.53281	9.94	25.91	19.10	35.85	29.04	56.00	46.00	-20.15	-16.96
3	1.66016	9.96	24.14	14.26	34.10	24.22	56.00	46.00	-21.90	-21.78
4	3.28125	10.11	26.52	17.77	36.63	27.88	56.00	46.00	-19.37	-18.12
5	14.69141	10.27	34.13	27.98	44.40	38.25	60.00	50.00	-15.60	-11.75
6	18.68359	10.47	34.94	27.89	45.41	38.36	60.00	50.00	-14.59	-11.64

Remarks:

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

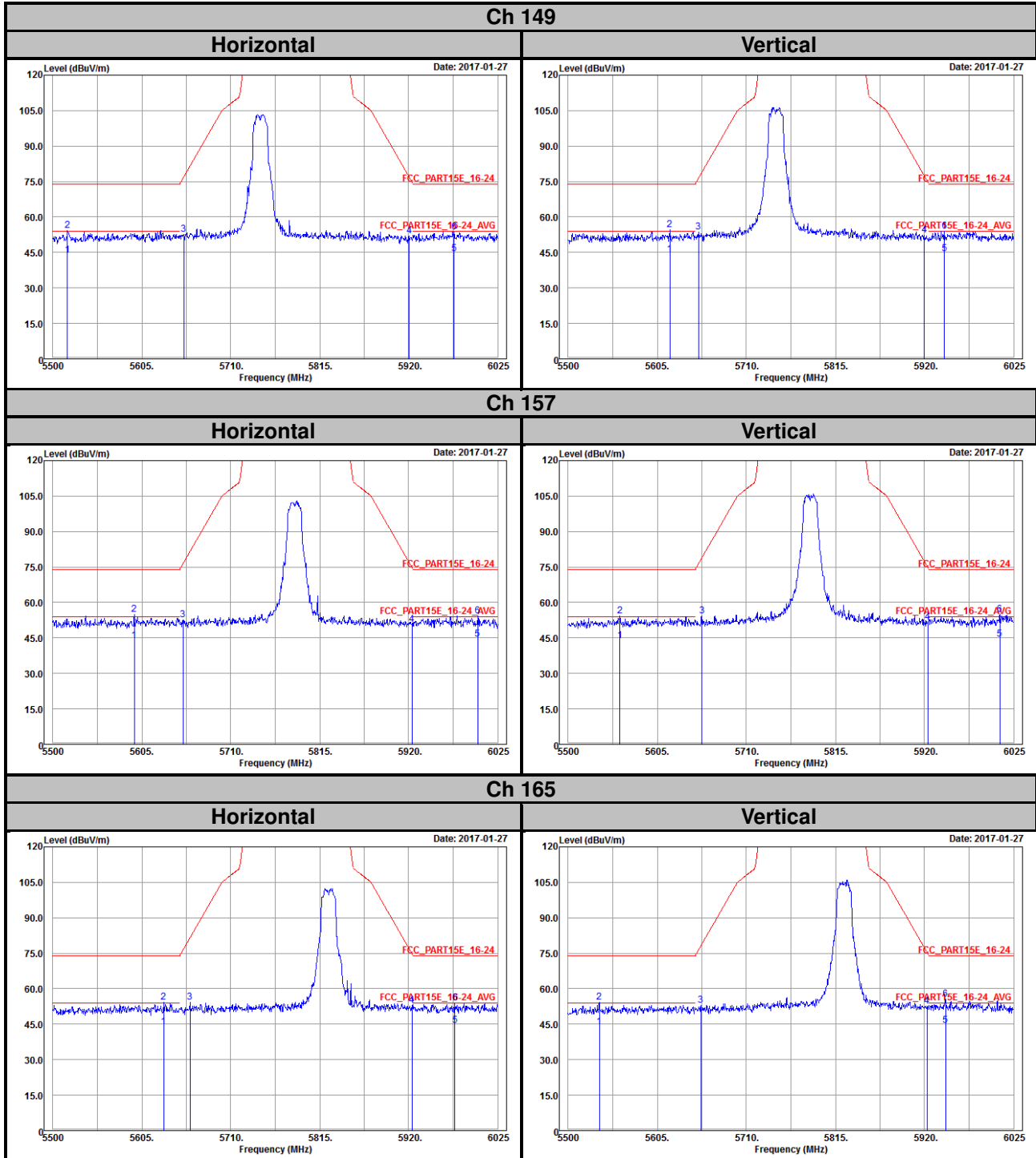


5 Pictures of Test Arrangements

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

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

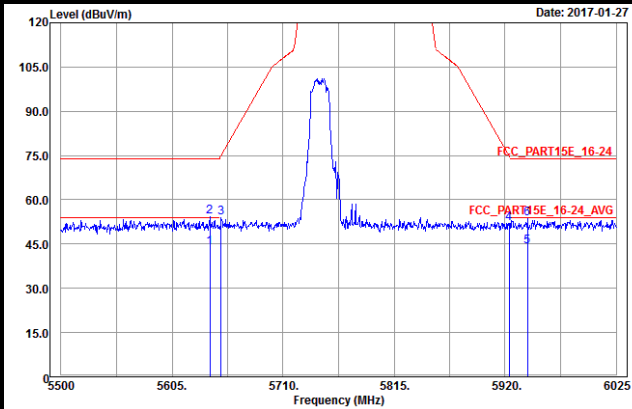
802.11a



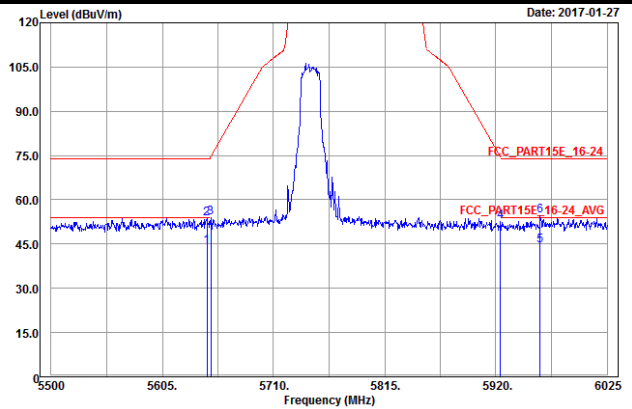
802.11n (HT20)

Ch 149

Horizontal

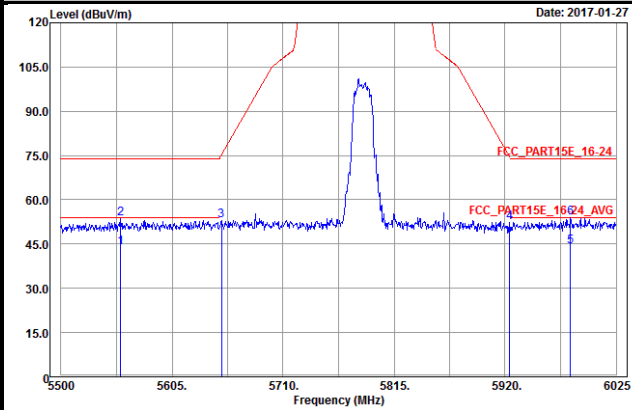


Vertical

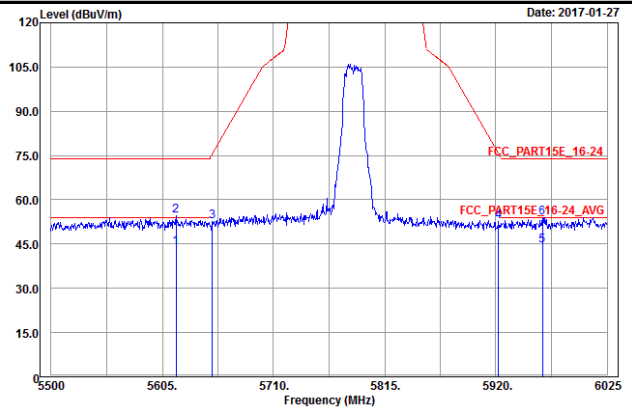


Ch 157

Horizontal

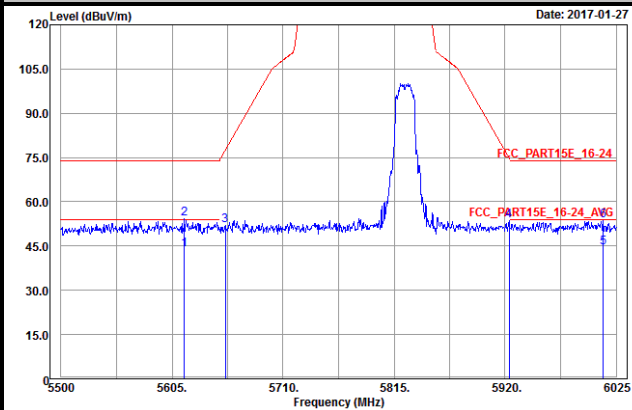


Vertical

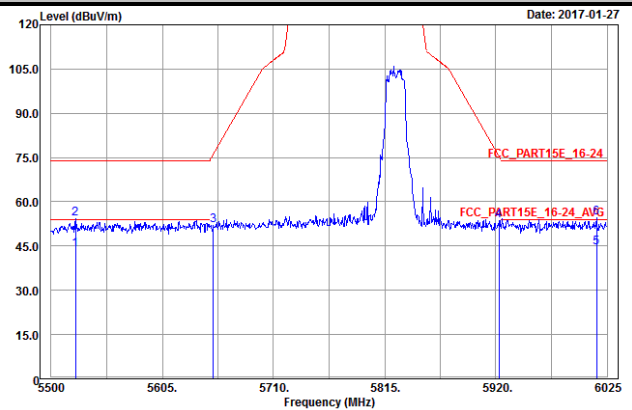


Ch 165

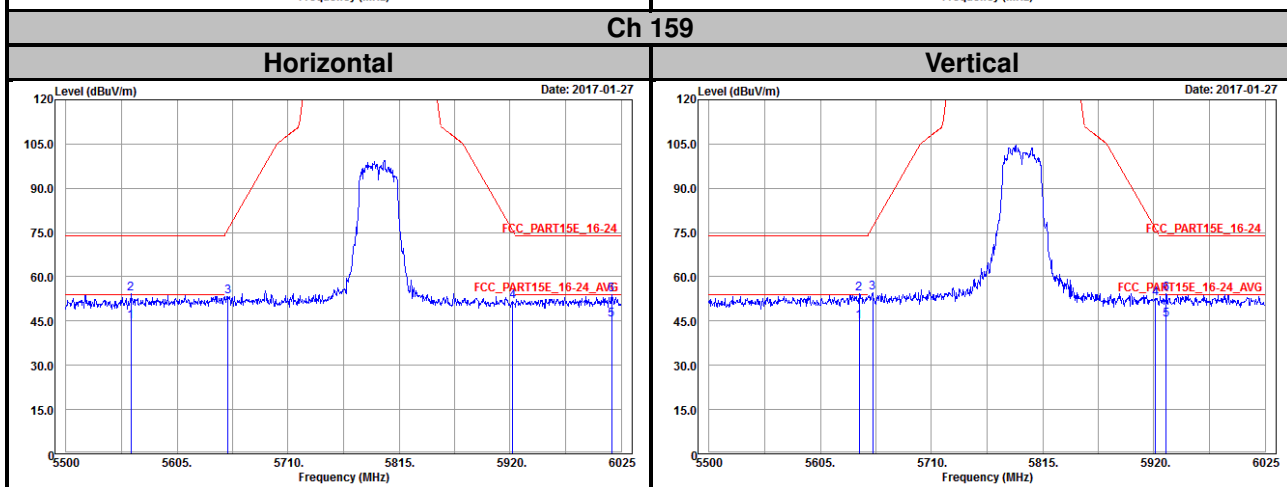
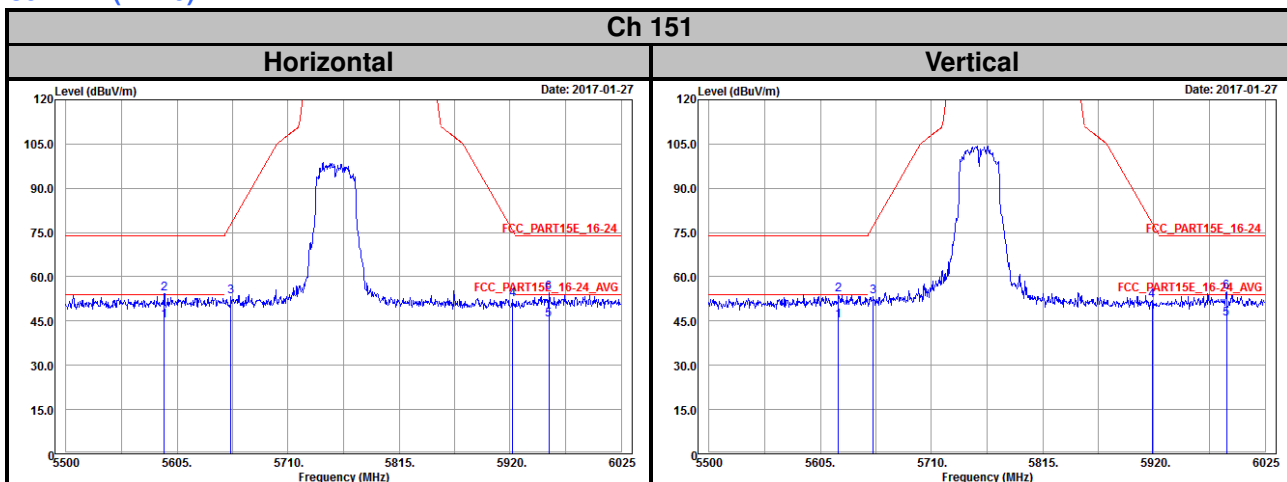
Horizontal



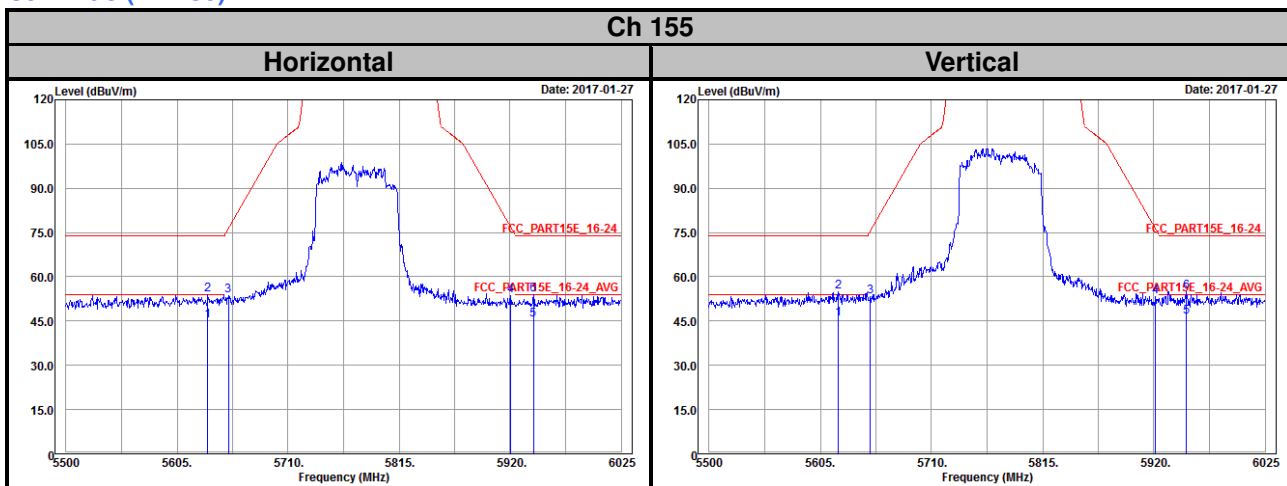
Vertical



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.

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

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Web Site: www.bureauveritas-adt.com

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

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