

FCC Test Report

Report No.: RF180518C15-4

FCC ID: I4L-BM25SD

Test Model: BM25

Received Date: May 18, 2018

Test Date: Jun. 06, 2018 ~ Jul. 13, 2018

Issued Date: Jul. 20, 2018

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF180518C15-4	Original Release	Jul. 20, 2018

1 Certificate of Conformity

Product: 802.11a/b/g/n/ac + BT 4.2 Module

Brand: MSI

Test Model: BM25

Sample Status: Identical Prototype

Applicant: Micro-Star INT'L CO., LTD.

Test Date: Jun. 06, 2018 ~ Jul. 13, 2018

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

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

Prepared by : Rona Chen, **Date:** Jul. 20, 2018
Rona Chen / Specialist

Approved by : Dylan Chiou, **Date:** Jul. 20, 2018
Dylan Chiou / Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -28.68 dB at 9.89763 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 -0.17 dB at 5353.41 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6 dB Bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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

2.1 Measurement Uncertainty

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

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

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	802.11a/b/g/n/ac + BT 4.2 Module	
Brand	MSI	
Test Model	BM25	
Status of EUT	Identical Prototype	
Power Supply Rating	3.6 Vdc (Host equipment)	
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 150.0 Mbps 802.11ac: up to 433.3 Mbps	
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)	
Output Power	60.256 mW for 5180 ~ 5240 MHz 61.944 mW for 5260 ~ 5320 MHz 60.674 mW for 5500 ~ 5700 MHz 62.373 mW for 5745 ~ 5825 MHz	
Antenna Type	Dipole antenna with	2.28 dBi gain (5180 ~ 5240 MHz) 2.19 dBi gain (5260 ~ 5320 MHz) 3.15 dBi gain (5500 ~ 5700 MHz) 2.93 dBi gain (5745 ~ 5825 MHz)
	PIFA antenna with	3.20 dBi gain (5180 ~ 5240 MHz) 3.40 dBi gain (5260 ~ 5320 MHz) 3.51 dBi gain (5500 ~ 5700 MHz) 3.03 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A	
Accessory Device	N/A	
Data Cable Supplied	N/A	

Note:

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

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

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

3.2 Description of Test Modes

For 5180 ~ 5240 MHz

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

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

2 channels are provided for 802.11n (HT40):

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

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	APCM	
A	√	√	√	-	EUT with Dipole Antenna
B	√	√	-	√	EUT with PIFA Antenna

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

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned as below.

Mode	5180-5240 MHz	5260-5320 MHz	5500-5700 MHz	5745-5825 MHz
A	Z-plane	Z-plane	X-plane	Z-plane
B	Z-plane	Z-plane	Y-plane	Y-plane

2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A, B	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
		802.11n (HT20)	100 to 140	100, 116, 140	OFDM	BPSK	6.5
		802.11n (HT40)	102 to 134	102, 110, 134	OFDM	BPSK	13.5
		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	29.3
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

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)
A	5500-5700	802.11a	100 to 140	100	OFDM	BPSK	6.0
B	5260-5320	802.11a	52 to 64	64	OFDM	BPSK	6.0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	5500-5700	802.11a	100 to 140	100	OFDM	BPSK	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Frequency Band (MHz)	Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
B	5180-5240	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
		802.11n (HT20)	36 to 48	36, 40, 48	OFDM	BPSK	6.5
		802.11n (HT40)	38 to 46	38, 46	OFDM	BPSK	13.5
		802.11ac (VHT80)	42	42	OFDM	BPSK	29.3
	5260-5320	802.11a	52 to 64	52, 60, 64	OFDM	BPSK	6.0
		802.11n (HT20)	52 to 64	52, 60, 64	OFDM	BPSK	6.5
		802.11n (HT40)	54 to 62	54, 62	OFDM	BPSK	13.5
		802.11ac (VHT80)	58	58	OFDM	BPSK	29.3
	5500-5700	802.11a	100 to 140	100, 116, 140	OFDM	BPSK	6.0
		802.11n (HT20)	100 to 140	100, 116, 140	OFDM	BPSK	6.5
		802.11n (HT40)	102 to 134	102, 110, 134	OFDM	BPSK	13.5
		802.11ac (VHT80)	106 to 122	106, 122	OFDM	BPSK	29.3
	5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
		802.11n (HT20)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
		802.11n (HT40)	151 to 159	151, 159	OFDM	BPSK	13.5
		802.11ac (VHT80)	155	155	OFDM	BPSK	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Jisyong Wang
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Getaz Yang
APCM	25 deg. C, 65 % RH	3.6 Vdc	Gavin Wu

3.3 Duty Cycle of Test Signal

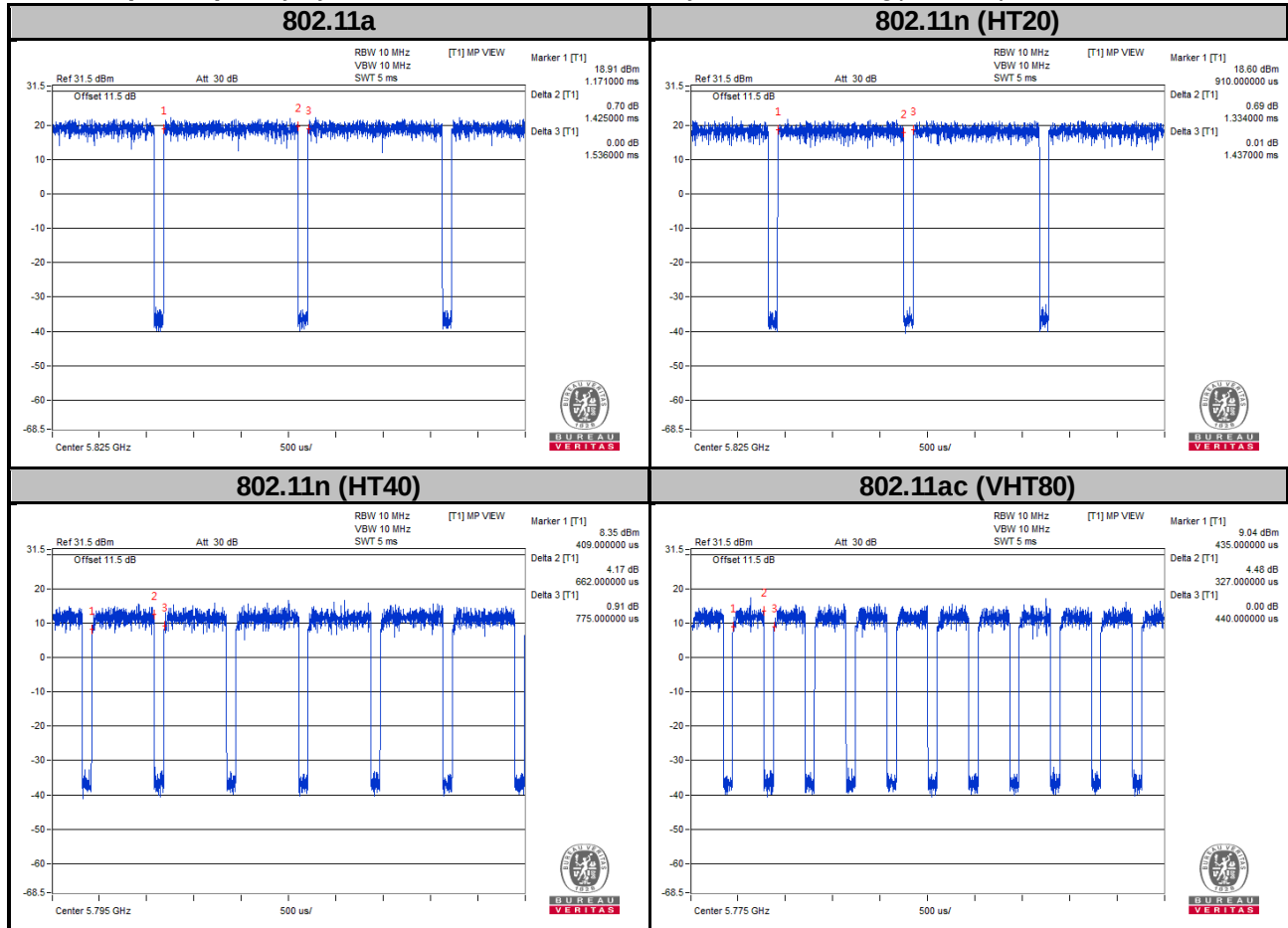
MODULATION TYPE: BPSK

802.11a: Duty cycle = $1.425/1.536 = 0.928$, Duty factor = $10 * \log(1/0.928) = 0.33$

802.11n (HT20): Duty cycle = $1.334/1.437 = 0.928$, Duty factor = $10 * \log(1/0.928) = 0.32$

802.11n (HT40): Duty cycle = $0.662/0.775 = 0.854$, Duty factor = $10 * \log(1/0.854) = 0.68$

802.11ac (VHT80): Duty cycle = $0.327/0.440 = 0.743$, Duty factor = $10 * \log(1/0.743) = 1.29$



3.4 Description of Support Units

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

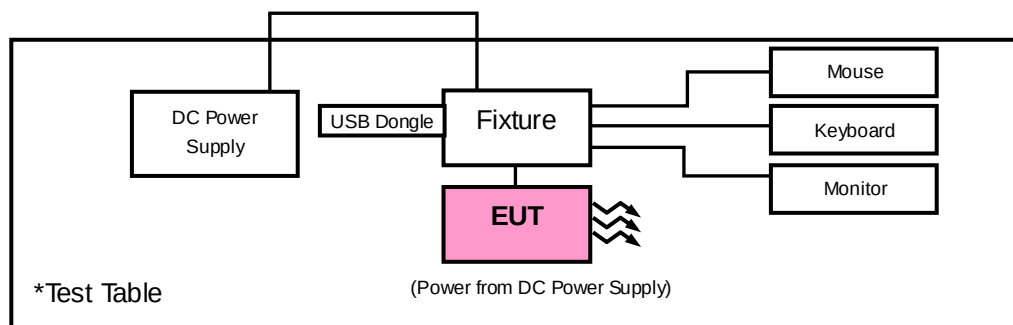
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	DC Power Supply	Topward	33010D	807748	N/A
2.	Mouse	DELL	MS111-P	CN-011D3V-71581-1CJ-09 2S	FCC DoC Approved
3.	Keyboard	DELL	KB4021	CN-05V23T-71581-1AK-01 Q2-A01	FCC DoC Approved
4.	Monitor	DELL	U2410	CN-0J257M-72872-0A6-08 JL	FCC DoC Approved
5.	USB Dongle	Transcend	N/A	N/A	N/A

No.	Signal Cable Description of The Above Support Units
1.	N/A
2.	1.8m shielded cable w/o core
3.	1.8m shielded cable w/o core
4.	1.2m shielded cable w/o core

Note:

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

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. 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 v02r01		Field Strength at 3 m	
		PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	15.407(b)(4)(i)	PK:-27 (dBm/MHz) ^{*1} PK:10 (dBm/MHz) ^{*2} PK:15.6 (dBm/MHz) ^{*3} PK:27 (dBm/MHz) ^{*4}	PK: 68.2 (dBμV/m) ^{*1} PK:105.2 (dBμV/m) ^{*2} PK: 110.8 (dBμV/m) ^{*3} PK:122.2 (dBμV/m) ^{*4}
	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

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

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

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

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

Note:

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

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

4.1.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 16, 2018	Mar. 15, 2019
Spectrum Analyzer Agilent	N9010A	MY52220314	Nov. 24, 2017	Nov. 23, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
Double Ridge Guide Horn Antenna EMCO	3115	5619	Nov. 30, 2017	Nov. 29, 2018
BILOG Antenna SCHWARZBECK	VULB 9168	9168-153	Dec. 06, 2017	Dec. 05, 2018
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019
Loop Antenna	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier EMCI	EMC001340	980201	Nov. 01, 2017	Oct. 30, 2018
Preamplifier EMCI	EMC 012645	980115	Oct. 20, 2017	Oct. 19, 2018
Preamplifier EMCI	EMC 184045	980116	Oct. 20, 2017	Oct. 19, 2018
Preamplifier EMCI	EMC 330H	980112	Oct. 13, 2017	Oct. 12, 2018
Power Meter Anritsu	ML2495A	1012010	Aug. 15, 2017	Aug. 14, 2018
Power Sensor Anritsu	MA2411B	1315050	Aug. 15, 2017	Aug. 14, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SM S-100-SMS-120+RFC-S MS-100-SMS-400)	Jun. 23, 2017	Jun. 22, 2018
			Jun. 19, 2018	Jun. 18, 2019
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM- 8000&3000	140811+170717	Oct. 20, 2017	Oct. 19, 2018
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(1 40807)	Oct. 20, 2017	Oct. 19, 2018
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 20, 2017	Oct. 19, 2018
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Temperature & Humidity Chamber	GTH-120-40-CP- AR	MAA1306-019	Sep. 08, 2017	Sep. 07, 2018
DC Power Supply Topward	33010D	807748	Oct. 25, 2016	Oct. 24, 2018

Digital Multimeter Fluke	87-III	70360742	Jun. 30, 2017	Jun. 29, 2018
			Jun. 29, 2018	Jun. 28, 2019
2WAY DIV Worken	2-18GHz 2Way SMA Fwd.:30W/Rev.:2 W Isolated Power	COM412W5E2	May 15, 2018	May 14, 2019

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

4.1.4 Test Procedures

For Radiated Emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Both Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated Emission above 30 MHz

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

Note:

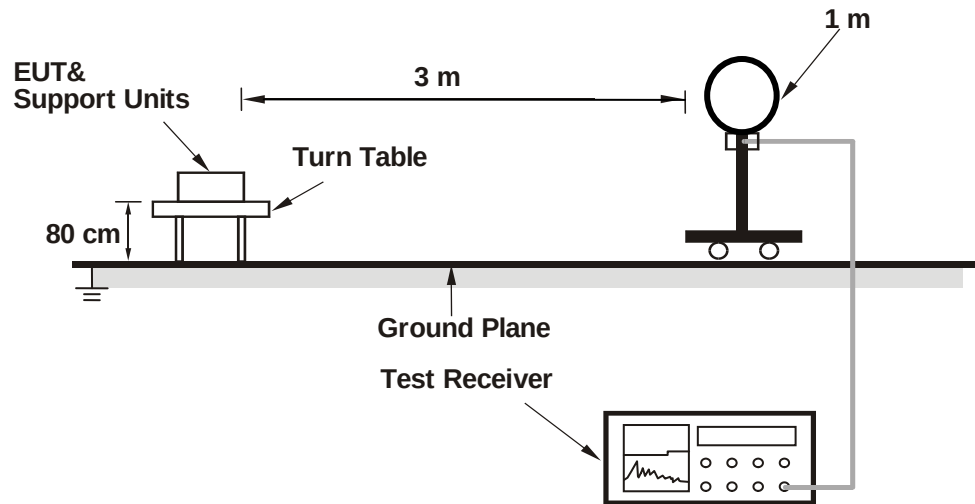
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98 %) or 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
(11a: RBW = 1 MHz, VBW = 1 kHz ; 11n (HT20): RBW = 1 MHz, VBW = 1 kHz ;
11n (HT40): RBW = 1 MHz, VBW = 3 kHz ; 11ac (VHT80): RBW = 1 MHz, VBW = 10 kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

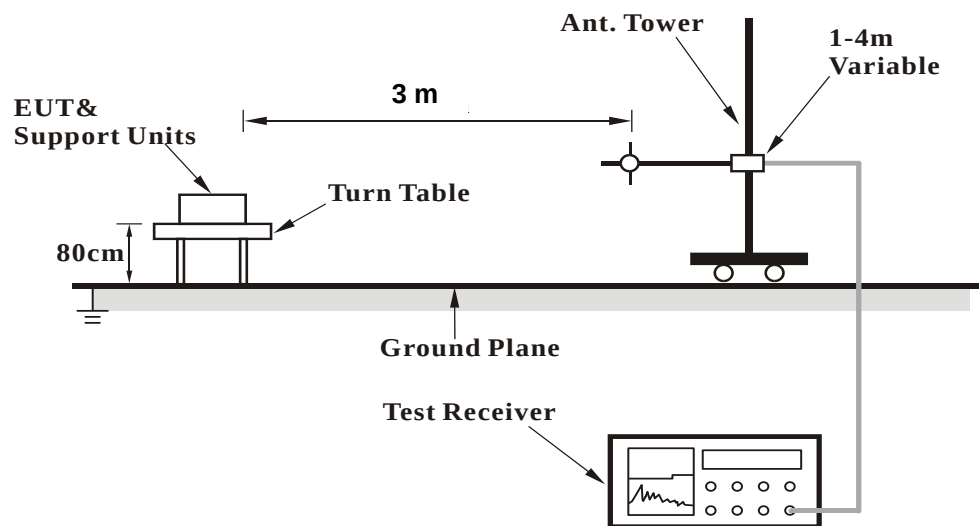
No deviation.

4.1.6 Test Setup

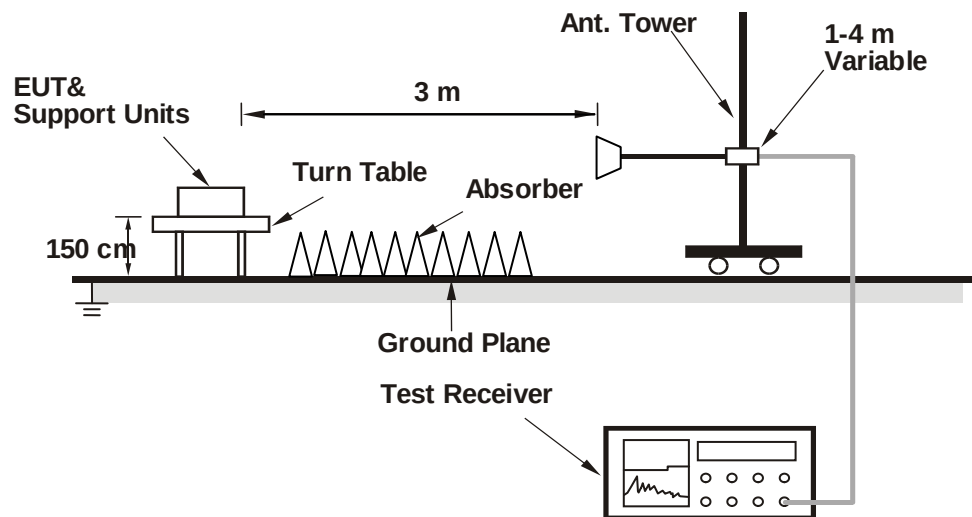
<Radiated Emission below 30 MHz>



<Radiated Emission 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



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

4.1.7 EUT Operating Conditions

- 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	Jisyoung Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.76	61.01	60.43	68.2	-7.19	31.56	6.34	37.32	151	150	Peak
5180	91.51	90.89			31.59	6.37	37.34	151	150	Average
5180	101.52	100.9			31.59	6.37	37.34	151	150	Peak
5352.53	51.28	50.29	68.2	-16.92	31.7	6.47	37.18	151	150	Peak
10360	56.79	59.55	68.2	-11.41	39.48	10.21	52.45	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.68	67.03	66.45	68.2	-1.17	31.56	6.34	37.32	110	241	Peak
5180	97.79	97.17			31.59	6.37	37.34	110	241	Average
5180	107.79	107.17			31.59	6.37	37.34	110	241	Peak
5376.73	51.19	50.18	68.2	-17.01	31.72	6.47	37.18	110	241	Peak
10360	55.07	57.83	68.2	-13.13	39.48	10.21	52.45	100	360	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.4	53.4	52.82	68.2	-14.8	31.56	6.34	37.32	128	151	Peak
5200	92.52	91.89			31.6	6.39	37.36	128	151	Average
5200	102.5	101.87			31.6	6.39	37.36	128	151	Peak
5427	51.04	49.93	68.2	-17.16	31.75	6.49	37.13	128	151	Peak
10400	54.77	57.51	68.2	-13.43	39.51	10.2	52.45	152	37	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
5146.7	56.96	56.38	68.2	-11.24	31.56	6.34	37.32	114	238	Peak
5200	98.49	97.86			31.6	6.39	37.36	114	238	Average
5200	108.53	107.9			31.6	6.39	37.36	114	238	Peak
5361	51.09	50.08	68.2	-17.11	31.72	6.47	37.18	114	238	Peak
10400	54.77	57.51	68.2	-13.43	39.51	10.2	52.45	155	125	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5200 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5056.16	51	50.49	68.2	-17.2	31.51	6.25	37.25	151	151	Peak
5240	92.5	91.78			31.62	6.42	37.32	151	151	Average
5240	102.47	101.75			31.62	6.42	37.32	151	151	Peak
5397.85	51.8	50.77	68.2	-16.4	31.74	6.47	37.18	151	151	Peak
10480	55.72	58.56	68.2	-12.48	39.6	10.22	52.66	132	254	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.86	52.22	51.64	68.2	-15.98	31.56	6.34	37.32	125	218	Peak
5240	98.32	97.6			31.62	6.42	37.32	125	218	Average
5240	108.35	107.63			31.62	6.42	37.32	125	218	Peak
5390.26	51.64	50.62	68.2	-16.56	31.73	6.47	37.18	125	218	Peak
10480	54.66	57.5	68.2	-13.54	39.6	10.22	52.66	100	152	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 52	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5025.92	50.66	50.19	68.2	-17.54	31.48	6.23	37.24	171	159	Peak
5260	93.93	93.12			31.65	6.43	37.27	171	159	Average
5260	103.68	102.87			31.65	6.43	37.27	171	159	Peak
5446.69	51.53	50.39	68.2	-16.67	31.77	6.5	37.13	171	159	Peak
10520	56.28	59.08	68.2	-11.92	39.66	10.27	52.73	115	106	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
5106.74	51.3	50.74	68.2	-16.9	31.54	6.3	37.28	132	4	Peak
5260	99.97	99.16			31.65	6.43	37.27	132	4	Average
5260	109.91	109.1			31.65	6.43	37.27	132	4	Peak
5409.07	52.16	51.12	68.2	-16.04	31.74	6.48	37.18	132	4	Peak
10520	57.1	59.9	68.2	-11.1	39.66	10.27	52.73	133	208	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5110.88	50.76	50.2	68.2	-17.44	31.54	6.3	37.28	162	158	Peak
5300	92.63	91.69			31.67	6.46	37.19	162	158	Average
5300	102.63	101.69			31.67	6.46	37.19	162	158	Peak
5350.99	53.27	52.28	68.2	-14.93	31.7	6.47	37.18	162	158	Peak
10600	56	58.83	68.2	-12.2	39.85	10.43	53.11	142	26	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147.78	52.53	51.95	68.2	-15.67	31.56	6.34	37.32	110	54	Peak
5300	98.63	97.69			31.67	6.46	37.19	110	54	Average
5300	108.73	107.79			31.67	6.46	37.19	110	54	Peak
5352.42	58.31	57.32	68.2	-9.89	31.7	6.47	37.18	110	54	Peak
10600	56.63	59.46	68.2	-11.57	39.85	10.43	53.11	100	122	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 64	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5058.68	51.06	50.54	68.2	-17.14	31.51	6.26	37.25	112	159	Peak
5320	92.94	91.99			31.68	6.46	37.19	112	159	Average
5320	103.03	102.08			31.68	6.46	37.19	112	159	Peak
5352.86	64.04	63.05	68.2	-4.16	31.7	6.47	37.18	112	159	Peak
10640	56.63	59.41	68.2	-11.57	39.93	10.36	53.07	100	91	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
5064.44	50.98	50.46	68.2	-17.22	31.51	6.26	37.25	141	41	Peak
5320	97.99	97.04			31.68	6.46	37.19	141	41	Average
5320	108.11	107.16			31.68	6.46	37.19	141	41	Peak
5352.86	67.11	66.12	68.2	-1.09	31.7	6.47	37.18	141	41	Peak
10640	54.38	57.16	68.2	-13.82	39.93	10.36	53.07	184	186	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 100	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.92	65.02	63.82	68.2	-3.18	31.77	6.51	37.08	134	332	Peak
5467.28	67.86	66.63	68.2	-0.34	31.79	6.52	37.08	134	332	Peak
5500	101.35	100.03			31.81	6.54	37.03	134	332	Average
5500	110.08	108.76			31.81	6.54	37.03	134	332	Peak
5726.44	52.11	50.6	68.2	-16.09	32.18	6.76	37.43	134	332	Peak
11000	54.77	56.67	68.2	-13.43	40.73	10.4	53.03	129	146	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
5459.76	56.41	55.21	68.2	-11.79	31.77	6.51	37.08	206	73	Peak
5469.84	65.03	63.8	68.2	-3.17	31.79	6.52	37.08	206	73	Peak
5500	95.15	93.83			31.81	6.54	37.03	206	73	Average
5500	104.94	103.62			31.81	6.54	37.03	206	73	Peak
5725.96	51.74	50.23	68.2	-16.46	32.18	6.76	37.43	206	73	Peak
11000	54.95	56.85	68.2	-13.25	40.73	10.4	53.03	133	219	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
4. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 116	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5432.4	53.31	52.19	68.2	-14.89	31.76	6.49	37.13	152	329	Peak
5469.36	51.23	50	68.2	-16.97	31.79	6.52	37.08	152	329	Peak
5580	102.88	101.47			31.92	6.65	37.16	152	329	Average
5580	111.67	110.26			31.92	6.65	37.16	152	329	Peak
5727.96	53.34	51.83	68.2	-14.86	32.18	6.76	37.43	152	329	Peak
11160	55.77	57.47	68.2	-12.43	40.56	10.52	52.78	125	111	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
5366.48	52.13	51.12	68.2	-16.07	31.72	6.47	37.18	275	176	Peak
5466.8	50.39	49.16	68.2	-17.81	31.79	6.52	37.08	275	176	Peak
5580	97.3	95.89			31.92	6.65	37.16	275	176	Average
5580	106.3	104.89			31.92	6.65	37.16	275	176	Peak
5730.04	53.94	52.43	68.2	-14.26	32.18	6.76	37.43	275	176	Peak
11160	55.08	56.78	68.2	-13.12	40.56	10.52	52.78	251	111	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 140	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5441.52	51.74	50.61	68.2	-16.46	31.76	6.5	37.13	125	316	Peak
5465.04	51.11	49.88	68.2	-17.09	31.79	6.52	37.08	125	316	Peak
5700	98.05	96.6			32.12	6.73	37.4	125	316	Average
5700	107.18	105.73			32.12	6.73	37.4	125	316	Peak
5726.28	67.54	80.34	68.2	-0.66	32.18	7.52	52.5	125	316	Peak
11140	54.63	56.31	68.2	-13.57	40.6	10.5	52.78	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5435.92	51.8	50.67	68.2	-16.4	31.76	6.5	37.13	100	96	Peak
5461.2	49.62	48.42	68.2	-18.58	31.77	6.51	37.08	100	96	Peak
5700	91.35	89.9			32.12	6.73	37.4	100	96	Average
5700	100.48	99.03			32.12	6.73	37.4	100	96	Peak
5725.16	61.74	60.23	68.2	-6.46	32.18	6.76	37.43	100	96	Peak
11140	53.69	55.37	68.2	-14.51	40.6	10.5	52.78	251	111	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
- The other emission levels were very low against the limit.

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

<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	98.95	97.43			32.21	6.78	37.47	249	7	Average
5745	106.65	105.13			32.21	6.78	37.47	249	7	Peak
11490	56.39	58.26	68.2	-11.81	40.25	10.66	52.78	256	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	100.24	98.72			32.21	6.78	37.47	168	318	Average
5745	109.01	107.49			32.21	6.78	37.47	168	318	Peak
11490	56.39	58.26	68.2	-11.81	40.25	10.66	52.78	152	111	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
5579.45	52.63	51.22	68.2	-15.57	31.92	6.65	37.16	249	7	Peak
5654.025	51.37	49.94	71.19	-19.82	32.06	6.71	37.34	249	7	Peak
5920.5	51.18	49.33	71.52	-20.34	32.49	6.86	37.5	249	7	Peak
5956.6	53.26	51.32	68.2	-14.94	32.57	6.87	37.5	249	7	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
5596.55	55.39	53.92	68.2	-12.81	31.95	6.68	37.16	168	318	Peak
5658.775	52.31	50.88	74.72	-22.41	32.06	6.71	37.34	168	318	Peak
5918.125	51.66	49.81	73.27	-21.61	32.49	6.86	37.5	168	318	Peak
5995.55	52.81	50.8	68.2	-15.39	32.63	6.89	37.51	168	318	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 157	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	98.05	96.51			32.26	6.82	37.54	238	32	Average
5785	105.61	104.07			32.26	6.82	37.54	238	32	Peak
11570	50.2	52.32	68.2	-18	40.13	10.76	53.01	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	99.78	98.24			32.26	6.82	37.54	162	326	Average
5785	107.81	106.27			32.26	6.82	37.54	162	326	Peak
11570	50.2	52.32	68.2	-18	40.13	10.76	53.01	321	152	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
5645	51.84	50.38	68.2	-16.36	32.04	6.7	37.28	238	32	Peak
5659.25	51.19	49.76	75.07	-23.88	32.06	6.71	37.34	238	32	Peak
5917.65	50.94	49.09	73.62	-22.68	32.49	6.86	37.5	238	32	Peak
6006	52.57	50.56	68.2	-15.63	32.63	6.89	37.51	238	32	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
5628.375	54.29	52.87	68.2	-13.91	32.01	6.69	37.28	162	326	Peak
5657.825	51.2	49.77	74.01	-22.81	32.06	6.71	37.34	162	326	Peak
5915.275	51.67	49.82	75.37	-23.7	32.49	6.86	37.5	162	326	Peak
5932.375	53.7	51.82	68.2	-14.5	32.52	6.86	37.5	162	326	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 165	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	99.6	97.94			32.35	6.84	37.53	254	31	Average
5825	107.84	106.18			32.35	6.84	37.53	254	31	Peak
11650	54.34	56.65	68.2	-13.86	40.03	10.8	53.14	247	185	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	97.62	95.96			32.35	6.84	37.53	154	297	Average
5825	108.45	106.79			32.35	6.84	37.53	154	297	Peak
11650	54.34	56.65	68.2	-13.86	40.03	10.8	53.14	265	285	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
5612.7	52.77	51.32	68.2	-15.43	31.98	6.69	37.22	254	31	Peak
5655.45	50.91	49.48	72.25	-21.34	32.06	6.71	37.34	254	31	Peak
5918.125	52.82	50.97	73.27	-20.45	32.49	6.86	37.5	254	31	Peak
5966.1	52.84	50.9	68.2	-15.36	32.57	6.88	37.51	254	31	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
5562.825	52.28	50.88	68.2	-15.92	31.89	6.63	37.12	154	297	Peak
5651.65	50.51	49.02	69.43	-18.92	32.06	6.71	37.28	154	297	Peak
5920.5	52.67	50.82	71.52	-18.85	32.49	6.86	37.5	154	297	Peak
5974.175	54.33	52.36	68.2	-13.87	32.6	6.88	37.51	154	297	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
- The other emission levels were very low against the limit.

802.11n (HT20)

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5146.52	59.75	59.17	68.2	-8.45	31.56	6.34	37.32	146	151	Peak
5180	89.96	89.34			31.59	6.37	37.34	146	151	Average
5180	99.91	99.29			31.59	6.37	37.34	146	151	Peak
5400.16	51.35	50.32	68.2	-16.85	31.74	6.47	37.18	146	151	Peak
10360	54.33	57.09	68.2	-13.87	39.48	10.21	52.45	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.94	66.36	65.78	68.2	-1.84	31.56	6.34	37.32	124	241	Peak
5180	97.59	96.97			31.59	6.37	37.34	124	241	Average
5180	107.53	106.91			31.59	6.37	37.34	124	241	Peak
5373.98	51.73	50.72	68.2	-16.47	31.72	6.47	37.18	124	241	Peak
10360	54.33	57.09	68.2	-13.87	39.48	10.21	52.45	152	231	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.58	54.41	53.83	68.2	-13.79	31.56	6.34	37.32	159	152	Peak
5200	92.29	91.66			31.6	6.39	37.36	159	152	Average
5200	102.32	101.69			31.6	6.39	37.36	159	152	Peak
5446.14	51.58	50.44	68.2	-16.62	31.77	6.5	37.13	159	152	Peak
10400	54.75	57.49	68.2	-13.45	39.51	10.2	52.45	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147.6	61.64	61.06	68.2	-6.56	31.56	6.34	37.32	102	241	Peak
5200	99.93	99.3			31.6	6.39	37.36	102	241	Average
5200	109.95	109.32			31.6	6.39	37.36	102	241	Peak
5433.82	51.57	50.45	68.2	-16.63	31.76	6.49	37.13	102	241	Peak
10400	54.16	56.9	68.2	-14.04	39.51	10.2	52.45	125	111	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5200 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.14	50.44	49.86	68.2	-17.76	31.56	6.34	37.32	118	151	Peak
5240	92.57	91.85			31.62	6.42	37.32	118	151	Average
5240	102.1	101.38			31.62	6.42	37.32	118	151	Peak
5405.99	52.27	51.24	68.2	-15.93	31.74	6.47	37.18	118	151	Peak
10480	55.19	58.03	68.2	-13.01	39.6	10.22	52.66	125	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.5	52.1	51.52	68.2	-16.1	31.56	6.34	37.32	132	196	Peak
5240	99.62	98.9			31.62	6.42	37.32	132	196	Average
5240	109.08	108.36			31.62	6.42	37.32	132	196	Peak
5364.74	51.76	50.75	68.2	-16.44	31.72	6.47	37.18	132	196	Peak
10480	54.39	57.23	68.2	-13.81	39.6	10.22	52.66	100	2	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 52	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5123.3	51.32	50.76	68.2	-16.88	31.55	6.31	37.3	104	153	Peak
5260	92.68	91.87			31.65	6.43	37.27	104	153	Average
5260	102.75	101.94			31.65	6.43	37.27	104	153	Peak
5372	51.69	50.68	68.2	-16.51	31.72	6.47	37.18	104	153	Peak
10520	56.4	59.2	68.2	-11.8	39.66	10.27	52.73	166	54	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
5110.52	51.04	50.48	68.2	-17.16	31.54	6.3	37.28	122	43	Peak
5260	100.98	100.17			31.65	6.43	37.27	122	43	Average
5260	110.98	110.17			31.65	6.43	37.27	122	43	Peak
5401.92	53.03	52	68.2	-15.17	31.74	6.47	37.18	122	43	Peak
10520	55.44	58.24	68.2	-12.76	39.66	10.27	52.73	107	209	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5056.7	50.82	50.3	68.2	-17.38	31.51	6.26	37.25	128	162	Peak
5300	95.03	94.09			31.67	6.46	37.19	128	162	Average
5300	103.74	102.8			31.67	6.46	37.19	128	162	Peak
5352.75	54.15	53.16	68.2	-14.05	31.7	6.47	37.18	128	162	Peak
10600	54.69	57.52	68.2	-13.51	39.85	10.43	53.11	100	86	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
5147.06	51.62	51.04	68.2	-16.58	31.56	6.34	37.32	106	7	Peak
5300	99.11	98.17			31.67	6.46	37.19	106	7	Average
5300	109.05	108.11			31.67	6.46	37.19	106	7	Peak
5350	59.33	58.34	68.2	-8.87	31.7	6.47	37.18	106	7	Peak
10600	55.73	58.56	68.2	-12.47	39.85	10.43	53.11	237	187	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 64	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5023.4	50.82	50.35	68.2	-17.38	31.48	6.23	37.24	106	162	Peak
5320	94.7	93.75			31.68	6.46	37.19	106	162	Average
5320	104.74	103.79			31.68	6.46	37.19	106	162	Peak
5350	65.47	64.48	68.2	-2.73	31.7	6.47	37.18	106	162	Peak
10640	57.34	60.12	68.2	-10.86	39.93	10.36	53.07	100	95	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
5010.8	50.73	50.27	68.2	-17.47	31.47	6.22	37.23	123	60	Peak
5320	99.54	98.59			31.68	6.46	37.19	123	60	Average
5320	109.61	108.66			31.68	6.46	37.19	123	60	Peak
5353.08	67.01	66.02	68.2	-1.19	31.7	6.47	37.18	123	60	Peak
10640	55.95	58.73	68.2	-12.25	39.93	10.36	53.07	204	259	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 100	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.48	60.78	59.58	68.2	-7.42	31.77	6.51	37.08	137	331	Peak
5464.24	67.32	66.1	68.2	-0.88	31.79	6.51	37.08	137	331	Peak
5500	100.65	99.33			31.81	6.54	37.03	137	331	Average
5500	109.62	108.3			31.81	6.54	37.03	137	331	Peak
5728.92	51.33	49.82	68.2	-16.87	32.18	6.76	37.43	137	331	Peak
11000	54.58	56.48	68.2	-13.62	40.73	10.4	53.03	111	27	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.6	54.11	52.91	68.2	-14.09	31.77	6.51	37.08	212	73	Peak
5469.68	58.62	57.39	68.2	-9.58	31.79	6.52	37.08	212	73	Peak
5500	93.15	91.83			31.81	6.54	37.03	212	73	Average
5500	102.08	100.76			31.81	6.54	37.03	212	73	Peak
5729.4	52.1	50.59	68.2	-16.1	32.18	6.76	37.43	212	73	Peak
11100	54.24	55.85	68.2	-13.96	40.63	10.47	52.71	252	263	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 116	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5428.56	54.17	53.05	68.2	-14.03	31.76	6.49	37.13	132	328	Peak
5469.2	52.4	51.17	68.2	-15.8	31.79	6.52	37.08	132	328	Peak
5580	103.18	101.77			31.92	6.65	37.16	132	328	Average
5580	112.63	111.22			31.92	6.65	37.16	132	328	Peak
5727.32	53.6	52.09	68.2	-14.6	32.18	6.76	37.43	132	328	Peak
11160	54.13	55.83	68.2	-14.07	40.56	10.52	52.78	155	112	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5436.08	51.61	50.48	68.2	-16.59	31.76	6.5	37.13	254	176	Peak
5460.24	50.84	49.64	68.2	-17.36	31.77	6.51	37.08	254	176	Peak
5580	97.58	96.17			31.92	6.65	37.16	254	176	Average
5580	105.82	104.41			31.92	6.65	37.16	254	176	Peak
5727.56	53.04	51.53	68.2	-15.16	32.18	6.76	37.43	254	176	Peak
11160	54.94	56.64	68.2	-13.26	40.56	10.52	52.78	152	231	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 140	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5441.04	51.73	50.6	68.2	-16.47	31.76	6.5	37.13	133	317	Peak
5466.96	50.33	49.1	68.2	-17.87	31.79	6.52	37.08	133	317	Peak
5700	99.15	97.7			32.12	6.73	37.4	133	317	Average
5700	107.82	106.37			32.12	6.73	37.4	133	317	Peak
5726.12	67.25	65.74	68.2	-0.95	32.18	6.76	37.43	133	317	Peak
11400	55.33	57.23	68.2	-12.87	40.33	10.47	52.7	285	265	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5415.44	51.61	50.56	68.2	-16.59	31.75	6.48	37.18	257	192	Peak
5468.24	50.38	49.15	68.2	-17.82	31.79	6.52	37.08	257	192	Peak
5700	92.85	91.4			32.12	6.73	37.4	257	192	Average
5700	102.06	100.61			32.12	6.73	37.4	257	192	Peak
5725	58.68	57.17	68.2	-9.52	32.18	6.76	37.43	257	192	Peak
11400	54.25	56.15	68.2	-13.95	40.33	10.47	52.7	163	298	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
- The other emission levels were very low against the limit.

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

<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	98.95	97.43			32.21	6.78	37.47	249	7	Average
5745	106.65	105.13			32.21	6.78	37.47	249	7	Peak
11490	53.34	55.21	68.2	-14.86	40.25	10.66	52.78	133	234	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	100.24	98.72			32.21	6.78	37.47	168	318	Average
5745	109.01	107.49			32.21	6.78	37.47	168	318	Peak
11490	53.34	55.21	68.2	-14.86	40.25	10.66	52.78	118	66	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
5579.45	52.63	51.22	68.2	-15.57	31.92	6.65	37.16	249	7	Peak
5654.025	51.37	49.94	71.19	-19.82	32.06	6.71	37.34	249	7	Peak
5920.5	51.18	49.33	71.52	-20.34	32.49	6.86	37.5	249	7	Peak
5956.6	53.26	51.32	68.2	-14.94	32.57	6.87	37.5	249	7	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
5596.55	55.39	53.92	68.2	-12.81	31.95	6.68	37.16	168	318	Peak
5658.775	52.31	50.88	74.72	-22.41	32.06	6.71	37.34	168	318	Peak
5918.125	51.66	49.81	73.27	-21.61	32.49	6.86	37.5	168	318	Peak
5995.55	52.81	50.8	68.2	-15.39	32.63	6.89	37.51	168	318	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 157	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	99.56	98.02			32.26	6.82	37.54	245	33	Average
5785	107.83	106.29			32.26	6.82	37.54	245	33	Peak
11570	54.8	56.92	68.2	-13.4	40.13	10.76	53.01	157	203	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	100.26	98.72			32.26	6.82	37.54	160	322	Average
5785	108.35	106.81			32.26	6.82	37.54	160	322	Peak
11570	52.6	54.72	68.2	-15.6	40.13	10.76	53.01	138	77	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
5550	51.25	49.84	68.2	-16.95	31.89	6.61	37.09	245	33	Peak
5652.125	50.54	49.05	69.78	-19.24	32.06	6.71	37.28	245	33	Peak
5922.875	51.84	49.96	69.77	-17.93	32.52	6.86	37.5	245	33	Peak
5940.925	52.91	50.99	68.2	-15.29	32.55	6.87	37.5	245	33	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5637.875	54.66	53.2	68.2	-13.54	32.04	6.7	37.28	160	322	Peak
5660.2	51.36	49.93	75.77	-24.41	32.06	6.71	37.34	160	322	Peak
5921.925	52.08	50.2	70.47	-18.39	32.52	6.86	37.5	160	322	Peak
5938.55	54.13	52.21	68.2	-14.07	32.55	6.87	37.5	160	322	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 165	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	92.66	91			32.35	6.84	37.53	187	317	Average
5825	101.55	99.89			32.35	6.84	37.53	187	317	Peak
11650	54.47	56.78	68.2	-13.73	40.03	10.8	53.14	185	214	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	97.14	95.48			32.35	6.84	37.53	179	327	Average
5825	106.85	105.19			32.35	6.84	37.53	179	327	Peak
11650	54.47	56.78	68.2	-13.73	40.03	10.8	53.14	185	265	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
5633.125	52.69	51.23	68.2	-15.51	32.04	6.7	37.28	187	317	Peak
5657.35	51.37	49.94	73.66	-22.29	32.06	6.71	37.34	187	317	Peak
5923.825	51.1	49.22	69.07	-17.97	32.52	6.86	37.5	187	317	Peak
6007.9	53.59	51.54	68.2	-14.61	32.67	6.89	37.51	187	317	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5603.675	51.96	50.52	68.2	-16.24	31.98	6.68	37.22	179	327	Peak
5659.725	51.86	50.43	75.42	-23.56	32.06	6.71	37.34	179	327	Peak
5922.875	52.51	50.63	69.77	-17.26	32.52	6.86	37.5	179	327	Peak
5972.75	53.78	51.81	68.2	-14.42	32.6	6.88	37.51	179	327	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
- The other emission levels were very low against the limit.

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5145.98	60.54	59.96	68.2	-7.66	31.56	6.34	37.32	129	254	Peak
5190	87.94	87.31			31.59	6.38	37.34	129	254	Average
5190	97.04	96.41			31.59	6.38	37.34	129	254	Peak
5371.56	51.3	50.29	68.2	-16.9	31.72	6.47	37.18	129	254	Peak
10380	55.6	58.34	68.2	-12.6	39.5	10.21	52.45	125	132	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.14	63.8	63.22	68.2	-4.4	31.56	6.34	37.32	121	338	Peak
5190	92.62	91.99			31.59	6.38	37.34	121	338	Average
5190	102.61	101.98			31.59	6.38	37.34	121	338	Peak
5350.66	51.69	50.7	68.2	-16.51	31.7	6.47	37.18	121	338	Peak
10380	53.11	55.85	68.2	-15.09	39.5	10.21	52.45	222	265	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 46	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.5	56.66	56.08	68.2	-11.54	31.56	6.34	37.32	126	251	Peak
5230	86.43	85.72			31.62	6.41	37.32	126	251	Average
5230	96.46	95.75			31.62	6.41	37.32	126	251	Peak
5453.4	51.39	50.19	68.2	-16.81	31.77	6.51	37.08	126	251	Peak
10460	54.72	57.52	68.2	-13.48	39.57	10.22	52.59	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.76	59.14	58.56	68.2	-9.06	31.56	6.34	37.32	124	339	Peak
5230	93.23	92.52			31.62	6.41	37.32	124	339	Average
5230	103.31	102.6			31.62	6.41	37.32	124	339	Peak
5379.81	52.09	51.07	68.2	-16.11	31.73	6.47	37.18	124	339	Peak
10460	54.06	56.86	68.2	-14.14	39.57	10.22	52.59	125	236	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 54	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5142.74	50.74	50.15	68.2	-17.46	31.56	6.33	37.3	106	160	Peak
5270	87.59	86.77			31.65	6.44	37.27	106	160	Average
5270	97.59	96.77			31.65	6.44	37.27	106	160	Peak
5352.09	51.51	50.52	68.2	-16.69	31.7	6.47	37.18	106	160	Peak
10540	55.08	57.93	68.2	-13.12	39.7	10.31	52.86	179	70	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
5128.88	50.81	50.24	68.2	-17.39	31.55	6.32	37.3	103	113	Peak
5270	91.78	90.96			31.65	6.44	37.27	103	113	Average
5270	101.69	100.87			31.65	6.44	37.27	103	113	Peak
5352.97	54.52	53.53	68.2	-13.68	31.7	6.47	37.18	103	113	Peak
10540	55.08	57.93	68.2	-13.12	39.7	10.31	52.86	253	181	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 62	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5088.02	50.99	50.46	68.2	-17.21	31.52	6.28	37.27	108	161	Peak
5310	86.92	85.97			31.68	6.46	37.19	108	161	Average
5310	97.83	96.88			31.68	6.46	37.19	108	161	Peak
5350.77	64.81	63.82	68.2	-3.39	31.7	6.47	37.18	108	161	Peak
10620	55.53	58.34	68.2	-12.67	39.89	10.39	53.09	100	238	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.32	51.76	51.18	68.2	-16.44	31.56	6.34	37.32	127	56	Peak
5310	95.39	94.44			31.68	6.46	37.19	127	56	Average
5310	105.29	104.34			31.68	6.46	37.19	127	56	Peak
5350.22	66.37	65.38	68.2	-1.83	31.7	6.47	37.18	127	56	Peak
10620	54.46	57.27	68.2	-13.74	39.89	10.39	53.09	187	147	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 102	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.64	62.54	61.34	68.2	-5.66	31.77	6.51	37.08	132	329	Peak
5469.36	67.63	66.4	68.2	-0.57	31.79	6.52	37.08	132	329	Peak
5510	96.66	95.36			31.81	6.55	37.06	132	329	Average
5510	105.43	104.13			31.81	6.55	37.06	132	329	Peak
5727.32	52.07	50.56	68.2	-16.13	32.18	6.76	37.43	132	329	Peak
11020	53.27	55.1	68.2	-14.93	40.71	10.41	52.95	165	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.92	55.09	53.89	68.2	-13.11	31.77	6.51	37.08	257	175	Peak
5469.2	60.37	59.14	68.2	-7.83	31.79	6.52	37.08	257	175	Peak
5510	89.46	88.16			31.81	6.55	37.06	257	175	Average
5510	98.1	96.8			31.81	6.55	37.06	257	175	Peak
5725.8	50.8	49.29	68.2	-17.4	32.18	6.76	37.43	257	175	Peak
11020	53.27	55.1	68.2	-14.93	40.71	10.41	52.95	196	247	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 110	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.12	53.35	52.15	68.2	-14.85	31.77	6.51	37.08	142	323	Peak
5467.44	59.83	58.6	68.2	-8.37	31.79	6.52	37.08	142	323	Peak
5550	97.5	96.09			31.89	6.61	37.09	142	323	Average
5550	105.47	104.06			31.89	6.61	37.09	142	323	Peak
5729	52.31	50.8	68.2	-15.89	32.18	6.76	37.43	142	323	Peak
11100	54.23	55.84	68.2	-13.97	40.63	10.47	52.71	185	265	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.32	51.57	50.37	68.2	-16.63	31.77	6.51	37.08	241	174	Peak
5467.76	53.38	52.15	68.2	-14.82	31.79	6.52	37.08	241	174	Peak
5550	91.2	89.79			31.89	6.61	37.09	241	174	Average
5550	100.04	98.63			31.89	6.61	37.09	241	174	Peak
5728.68	51.51	50	68.2	-16.69	32.18	6.76	37.43	241	174	Peak
11100	54.09	55.7	68.2	-14.11	40.63	10.47	52.71	321	145	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 134	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5451.92	51.76	50.56	68.2	-16.44	31.77	6.51	37.08	117	316	Peak
5469.04	51.65	50.42	68.2	-16.55	31.79	6.52	37.08	117	316	Peak
5670	95.01	93.54			32.09	6.72	37.34	117	316	Average
5670	103.48	102.01			32.09	6.72	37.34	117	316	Peak
5727.24	57.82	56.31	68.2	-10.38	32.18	6.76	37.43	117	316	Peak
11340	54.65	56.45	68.2	-13.55	40.4	10.52	52.72	152	111	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
5397.2	51.2	50.17	68.2	-17	31.74	6.47	37.18	100	95	Peak
5463.28	50.98	49.76	68.2	-17.22	31.79	6.51	37.08	100	95	Peak
5670	87.91	86.44			32.09	6.72	37.34	100	95	Average
5670	96.77	95.3			32.09	6.72	37.34	100	95	Peak
5728.12	52.59	51.08	68.2	-15.61	32.18	6.76	37.43	100	95	Peak
11340	54.65	56.45	68.2	-13.55	40.4	10.52	52.72	111	152	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5670 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	87.62	86.07			32.23	6.79	37.47	104	285	Average
5755	96.54	94.99			32.23	6.79	37.47	104	285	Peak
11510	56.31	58.2	68.2	-11.89	40.23	10.69	52.81	152	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
5755	92.32	90.77			32.23	6.79	37.47	100	128	Average
5755	101.09	99.54			32.23	6.79	37.47	100	128	Peak
11510	55.69	57.58	68.2	-12.51	40.23	10.69	52.81	232	256	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
5618.875	51.19	49.71	68.2	-17.01	32.01	6.69	37.22	104	285	Peak
5658.3	50.15	48.72	74.36	-24.21	32.06	6.71	37.34	104	285	Peak
5923.825	52.21	50.33	69.07	-16.86	32.52	6.86	37.5	104	285	Peak
5928.1	52.83	50.95	68.2	-15.37	32.52	6.86	37.5	104	285	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
5632.175	52.42	50.99	68.2	-15.78	32.01	6.7	37.28	100	128	Peak
5655.45	52.76	51.33	72.25	-19.49	32.06	6.71	37.34	100	128	Peak
5918.6	51.27	49.42	72.92	-21.65	32.49	6.86	37.5	100	128	Peak
5973.225	52.86	50.89	68.2	-15.34	32.6	6.88	37.51	100	128	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 159	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	88.13	86.55			32.29	6.83	37.54	106	290	Average
5795	96.53	94.95			32.29	6.83	37.54	106	290	Peak
11590	54.46	56.58	68.2	-13.74	40.11	10.78	53.01	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5795	91.83	90.25			32.29	6.83	37.54	101	234	Average
5795	100.65	99.07			32.29	6.83	37.54	101	234	Peak
11590	52.92	55.04	68.2	-15.28	40.11	10.78	53.01	251	111	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5619.35	51.33	49.85	68.2	-16.87	32.01	6.69	37.22	106	290	Peak
5658.3	50.42	48.99	74.36	-23.94	32.06	6.71	37.34	106	290	Peak
5923.825	51.28	49.4	69.07	-17.79	32.52	6.86	37.5	106	290	Peak
6011.7	52.12	50.06	68.2	-16.08	32.67	6.89	37.5	106	290	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
5635.025	51.39	49.93	68.2	-16.81	32.04	6.7	37.28	101	234	Peak
5658.775	52.54	51.11	74.72	-22.18	32.06	6.71	37.34	101	234	Peak
5916.225	52.1	50.25	74.67	-22.57	32.49	6.86	37.5	101	234	Peak
5982.25	53.35	51.38	68.2	-14.85	32.6	6.88	37.51	101	234	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5144.18	64.85	64.28	68.2	-3.35	31.56	6.33	37.32	110	254	Peak
5210	85.81	85.16			31.61	6.4	37.36	110	254	Average
5210	95.82	95.17			31.61	6.4	37.36	110	254	Peak
5352.64	51.81	50.82	68.2	-16.39	31.7	6.47	37.18	110	254	Peak
10420	55	57.71	68.2	-13.2	39.53	10.21	52.45	152	111	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
5145.62	65.85	65.27	68.2	-2.35	31.56	6.34	37.32	124	303	Peak
5210	91.31	90.66			31.61	6.4	37.36	124	303	Average
5210	101.32	100.67			31.61	6.4	37.36	124	303	Peak
5357.26	54.98	53.99	68.2	-13.22	31.7	6.47	37.18	124	303	Peak
10420	55.51	58.22	68.2	-12.69	39.53	10.21	52.45	125	144	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5030.96	51.28	50.81	68.2	-16.92	31.48	6.23	37.24	115	161	Peak
5290	85.8	84.92			31.66	6.45	37.23	115	161	Average
5290	95.26	94.38			31.66	6.45	37.23	115	161	Peak
5354.29	60.65	59.66	68.2	-7.55	31.7	6.47	37.18	115	161	Peak
10580	56.4	59.31	68.2	-11.8	39.81	10.39	53.11	100	130	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
5145.44	53.03	52.45	68.2	-15.17	31.56	6.34	37.32	125	58	Peak
5290	92.39	91.51			31.66	6.45	37.23	125	58	Average
5290	102.4	101.52			31.66	6.45	37.23	125	58	Peak
5350.44	66.38	65.39	68.2	-1.82	31.7	6.47	37.18	125	58	Peak
10580	55.6	58.51	68.2	-12.6	39.81	10.39	53.11	186	264	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5457.04	66.44	65.24	68.2	-1.76	31.77	6.51	37.08	133	329	Peak
5465.2	66.75	65.52	68.2	-1.45	31.79	6.52	37.08	133	329	Peak
5530	92.23	90.9			31.84	6.58	37.09	133	329	Average
5530	101.44	100.11			31.84	6.58	37.09	133	329	Peak
5728.52	51.24	49.73	68.2	-16.96	32.18	6.76	37.43	133	329	Peak
11060	53.8	55.49	68.2	-14.4	40.66	10.44	52.79	251	111	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
5460.08	57.89	56.69	68.2	-10.31	31.77	6.51	37.08	216	176	Peak
5468.24	60.58	59.35	68.2	-7.62	31.79	6.52	37.08	216	176	Peak
5530	86.52	85.19			31.84	6.58	37.09	216	176	Average
5530	95.47	94.14			31.84	6.58	37.09	216	176	Peak
5728.68	50.96	49.45	68.2	-17.24	32.18	6.76	37.43	216	176	Peak
11060	53.8	55.49	68.2	-14.4	40.66	10.44	52.79	251	145	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.12	59.08	57.88	68.2	-9.12	31.77	6.51	37.08	120	320	Peak
5466.8	57.3	56.07	68.2	-10.9	31.79	6.52	37.08	120	320	Peak
5610	94.26	92.82			31.98	6.68	37.22	120	320	Average
5610	103.42	101.98			31.98	6.68	37.22	120	320	Peak
5725.32	56.84	55.33	68.2	-11.36	32.18	6.76	37.43	120	320	Peak
11120	55.01	56.65	68.2	-13.19	40.61	10.49	52.74	152	111	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.32	53.66	52.46	68.2	-14.54	31.77	6.51	37.08	274	175	Peak
5466.16	53.23	52	68.2	-14.97	31.79	6.52	37.08	274	175	Peak
5610	88.76	87.32			31.98	6.68	37.22	274	175	Average
5610	98	96.56			31.98	6.68	37.22	274	175	Peak
5727.32	53.63	52.12	68.2	-14.57	32.18	6.76	37.43	274	175	Peak
11120	53.32	54.96	68.2	-14.88	40.61	10.49	52.74	205	236	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5610 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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	Jisyong Wang

<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	86.97	85.4			32.26	6.81	37.5	108	290	Average
5775	96.4	94.83			32.26	6.81	37.5	108	290	Peak
11550	51.94	53.98	68.2	-16.26	40.16	10.74	52.94	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5775	92.47	90.9			32.26	6.81	37.5	124	137	Average
5775	101.18	99.61			32.26	6.81	37.5	124	137	Peak
11550	51.94	53.98	68.2	-16.26	40.16	10.74	52.94	256	323	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5634.075	52.39	50.93	68.2	-15.81	32.04	6.7	37.28	108	290	Peak
5652.125	52.37	50.88	69.78	-17.41	32.06	6.71	37.28	108	290	Peak
5917.175	51.99	50.14	73.97	-21.98	32.49	6.86	37.5	108	290	Peak
6017.4	52.65	50.58	68.2	-15.55	32.67	6.9	37.5	108	290	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
5641.675	57.52	56.06	68.2	-10.68	32.04	6.7	37.28	124	137	Peak
5654.975	59.79	58.36	71.9	-12.11	32.06	6.71	37.34	124	137	Peak
5923.825	54.46	52.58	69.07	-14.61	32.52	6.86	37.5	124	137	Peak
5939.025	56.16	54.24	68.2	-12.04	32.55	6.87	37.5	124	137	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
- The other emission levels were very low against the limit.

Mode B

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.58	67.24	66.66	68.2	-0.96	31.56	6.34	37.32	134	283	Peak
5180	100.06	99.44			31.59	6.37	37.34	134	283	Average
5180	108.54	107.92			31.59	6.37	37.34	134	283	Peak
5405.88	51.87	50.84	68.2	-16.33	31.74	6.47	37.18	134	283	Peak
10360	56.73	59.49	68.2	-11.47	39.48	10.21	52.45	155	109	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.5	67.55	66.97	68.2	-0.65	31.56	6.34	37.32	100	186	Peak
5180	100.76	100.14			31.59	6.37	37.34	100	186	Average
5180	108.96	108.34			31.59	6.37	37.34	100	186	Peak
5363.97	53.02	52.01	68.2	-15.18	31.72	6.47	37.18	100	186	Peak
10360	55.63	58.39	68.2	-12.57	39.48	10.21	52.45	100	124	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5180 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.86	62.85	62.27	68.2	-5.35	31.56	6.34	37.32	134	282	Peak
5200	102.4	101.77			31.6	6.39	37.36	134	282	Average
5200	111.2	110.57			31.6	6.39	37.36	134	282	Peak
5351.1	54.18	53.19	68.2	-14.02	31.7	6.47	37.18	134	282	Peak
10400	55.88	58.62	68.2	-12.32	39.51	10.2	52.45	100	24	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.68	62.59	62.01	68.2	-5.61	31.56	6.34	37.32	107	185	Peak
5200	103.13	102.5			31.6	6.39	37.36	107	185	Average
5200	112.52	111.89			31.6	6.39	37.36	107	185	Peak
5387.29	53.38	52.36	68.2	-14.82	31.73	6.47	37.18	107	185	Peak
10400	53.39	56.13	68.2	-14.81	39.51	10.2	52.45	133	245	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5200 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5052.92	51.76	51.27	68.2	-16.44	31.49	6.25	37.25	147	222	Peak
5240	99.55	98.83			31.62	6.42	37.32	147	222	Average
5240	108	107.28			31.62	6.42	37.32	147	222	Peak
5388.17	52.87	51.85	68.2	-15.33	31.73	6.47	37.18	147	222	Peak
10480	54.76	57.6	68.2	-13.44	39.6	10.22	52.66	143	297	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
5147.24	52.36	51.78	68.2	-15.84	31.56	6.34	37.32	100	186	Peak
5240	103.44	102.72			31.62	6.42	37.32	100	186	Average
5240	112.53	111.81			31.62	6.42	37.32	100	186	Peak
5388.83	54.22	53.2	68.2	-13.98	31.73	6.47	37.18	100	186	Peak
10480	55.52	58.36	68.2	-12.68	39.6	10.22	52.66	116	88	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 52	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5115.02	52.61	52.04	68.2	-15.59	31.54	6.31	37.28	133	283	Peak
5262	102.38	101.57			31.65	6.43	37.27	133	283	Average
5262	111.47	110.66			31.65	6.43	37.27	133	283	Peak
5405.77	53.77	52.74	68.2	-14.43	31.74	6.47	37.18	133	283	Peak
10520	55.35	58.15	68.2	-12.85	39.66	10.27	52.73	187	318	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
5111.42	52.54	51.98	68.2	-15.66	31.54	6.3	37.28	118	188	Peak
5260	103.08	102.27			31.65	6.43	37.27	118	188	Average
5260	112.04	111.23			31.65	6.43	37.27	118	188	Peak
5415.34	53.93	52.88	68.2	-14.27	31.75	6.48	37.18	118	188	Peak
10520	54.36	57.16	68.2	-13.84	39.66	10.27	52.73	101	208	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5054.72	51.48	50.97	68.2	-16.72	31.51	6.25	37.25	143	283	Peak
5300	102.83	101.89			31.67	6.46	37.19	143	283	Average
5300	111.37	110.43			31.67	6.46	37.19	143	283	Peak
5352.09	59.45	58.46	68.2	-8.75	31.7	6.47	37.18	143	283	Peak
10600	56.15	58.98	68.2	-12.05	39.85	10.43	53.11	165	106	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
5144.36	51.55	50.98	68.2	-16.65	31.56	6.33	37.32	125	187	Peak
5300	103.23	102.29			31.67	6.46	37.19	125	187	Average
5300	112.28	111.34			31.67	6.46	37.19	125	187	Peak
5350.22	60.89	59.9	68.2	-7.31	31.7	6.47	37.18	125	187	Peak
10600	54.07	56.9	68.2	-14.13	39.85	10.43	53.11	126	235	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 64	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5097.02	50.81	50.27	68.2	-17.39	31.53	6.29	37.28	127	284	Peak
5320	100.89	99.94			31.68	6.46	37.19	127	284	Average
5320	110	109.05			31.68	6.46	37.19	127	284	Peak
5351.43	67.22	66.23	68.2	-0.98	31.7	6.47	37.18	127	284	Peak
10640	55.04	57.82	68.2	-13.16	39.93	10.36	53.07	177	115	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5031.32	51.63	51.15	68.2	-16.57	31.48	6.24	37.24	137	195	Peak
5320	99.85	98.9			31.68	6.46	37.19	137	195	Average
5320	108.7	107.75			31.68	6.46	37.19	137	195	Peak
5353.41	68.03	67.04	68.2	-0.17	31.7	6.47	37.18	137	195	Peak
10640	53.28	56.06	68.2	-14.92	39.93	10.36	53.07	155	236	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 100	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458	61.73	60.53	68.2	-6.47	31.77	6.51	37.08	106	242	Peak
5469.52	66.91	65.68	68.2	-1.29	31.79	6.52	37.08	106	242	Peak
5500	98.49	97.17			31.81	6.54	37.03	106	242	Average
5500	107.23	105.91			31.81	6.54	37.03	106	242	Peak
5727.24	51.3	49.79	68.2	-16.9	32.18	6.76	37.43	106	242	Peak
11000	56.31	58.21	68.2	-11.89	40.73	10.4	53.03	152	111	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
5459.76	61.71	60.51	68.2	-6.49	31.77	6.51	37.08	105	336	Peak
5468.56	67.52	66.29	68.2	-0.68	31.79	6.52	37.08	105	336	Peak
5500	99.6	98.28			31.81	6.54	37.03	105	336	Average
5500	108.31	106.99			31.81	6.54	37.03	105	336	Peak
5729.48	51.03	49.52	68.2	-17.17	32.18	6.76	37.43	105	336	Peak
11000	55.36	57.26	68.2	-12.84	40.73	10.4	53.03	236	21	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 116	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5430.32	53.27	52.15	68.2	-14.93	31.76	6.49	37.13	113	235	Peak
5467.44	50.45	49.22	68.2	-17.75	31.79	6.52	37.08	113	235	Peak
5580	100.78	99.37			31.92	6.65	37.16	113	235	Average
5580	108.78	107.37			31.92	6.65	37.16	113	235	Peak
5728.68	53.21	51.7	68.2	-14.99	32.18	6.76	37.43	113	235	Peak
11160	58.68	60.38	68.2	-9.52	40.56	10.52	52.78	251	123	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
5427.92	51.34	50.23	68.2	-16.86	31.75	6.49	37.13	106	320	Peak
5460.4	50.7	49.5	68.2	-17.5	31.77	6.51	37.08	106	320	Peak
5580	100.72	99.31			31.92	6.65	37.16	106	320	Average
5580	109.51	108.1			31.92	6.65	37.16	106	320	Peak
5726.12	52.99	51.48	68.2	-15.21	32.18	6.76	37.43	106	320	Peak
11160	60.34	62.04	68.2	-7.86	40.56	10.52	52.78	231	256	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 140	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5400.24	51.43	50.4	68.2	-16.77	31.74	6.47	37.18	100	241	Peak
5467.28	50.77	49.54	68.2	-17.43	31.79	6.52	37.08	100	241	Peak
5700	97.71	96.26			32.12	6.73	37.4	115	241	Average
5700	105.11	103.66			32.12	6.73	37.4	115	241	Peak
5726.04	66.13	64.62	68.2	-2.07	32.18	6.76	37.43	100	241	Peak
11400	55.16	56.84	68.2	-13.04	40.6	10.5	52.78	231	152	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
5400.88	50.97	49.94	68.2	-17.23	31.74	6.47	37.18	127	316	Peak
5468.24	50.82	49.59	68.2	-17.38	31.79	6.52	37.08	127	316	Peak
5700	97.83	96.38			32.12	6.73	37.4	127	316	Average
5700	105.24	103.79			32.12	6.73	37.4	127	316	Peak
5725.96	66.85	65.34	68.2	-1.35	32.18	6.76	37.43	127	316	Peak
11400	55.61	57.29	68.2	-12.59	40.6	10.5	52.78	256	111	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
- The other emission levels were very low against the limit.

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

<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	100.51	98.99			32.21	6.78	37.47	111	241	Average
5745	108.97	107.45			32.21	6.78	37.47	111	241	Peak
11490	56.65	58.52	68.2	-11.55	40.25	10.66	52.78	152	111	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	101.08	99.56			32.21	6.78	37.47	156	199	Average
5745	109.87	108.35			32.21	6.78	37.47	156	199	Peak
11490	56.24	58.11	68.2	-11.96	40.25	10.66	52.78	252	263	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
5591.8	53.93	52.47	68.2	-14.27	31.95	6.67	37.16	111	241	Peak
5658.3	52.88	51.45	74.36	-21.48	32.06	6.71	37.34	111	241	Peak
5915.275	50.85	49	75.37	-24.52	32.49	6.86	37.5	111	241	Peak
6008.375	52.72	50.67	68.2	-15.48	32.67	6.89	37.51	111	241	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5598.925	52.99	51.49	68.2	-15.21	31.98	6.68	37.16	156	199	Peak
5654.975	51.93	50.5	71.9	-19.97	32.06	6.71	37.34	156	199	Peak
5921.45	51.32	49.47	70.82	-19.5	32.49	6.86	37.5	156	199	Peak
6022.625	52.76	50.69	68.2	-15.44	32.67	6.9	37.5	156	199	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 157	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	94.06			32.26	6.82	37.54	144	208	Average
5785	104.09	102.55			32.26	6.82	37.54	144	208	Peak
11570	55.67	57.79	68.2	-12.53	40.13	10.76	53.01	251	145	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5785	100.31	98.77			32.26	6.82	37.54	153	198	Average
5785	108.6	107.06			32.26	6.82	37.54	153	198	Peak
11570	55.67	57.79	68.2	-12.53	40.13	10.76	53.01	256	185	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
5635.5	54.95	53.49	68.2	-13.25	32.04	6.7	37.28	144	208	Peak
5658.3	51.09	49.66	74.36	-23.27	32.06	6.71	37.34	144	208	Peak
5921.45	51.43	49.58	70.82	-19.39	32.49	6.86	37.5	144	208	Peak
5931.425	53.79	51.91	68.2	-14.41	32.52	6.86	37.5	144	208	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5636.45	53.75	52.29	68.2	-14.45	32.04	6.7	37.28	153	198	Peak
5658.3	51.97	50.54	74.36	-22.39	32.06	6.71	37.34	153	198	Peak
5920.5	51.94	50.09	71.52	-19.58	32.49	6.86	37.5	153	198	Peak
5934.275	54.47	52.59	68.2	-13.73	32.52	6.86	37.5	153	198	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 165	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	102.15	100.49			32.35	6.84	37.53	117	198	Average
5825	109.4	107.74			32.35	6.84	37.53	117	198	Peak
11650	55.07	57.38	68.2	-13.13	40.03	10.8	53.14	102	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
5825	102.78	101.12			32.35	6.84	37.53	152	211	Average
5825	110.27	108.61			32.35	6.84	37.53	152	211	Peak
11650	53.12	55.43	68.2	-15.08	40.03	10.8	53.14	285	295	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
5604.15	52.08	50.64	68.2	-16.12	31.98	6.68	37.22	152	211	Peak
5654.975	51.06	49.63	71.9	-20.84	32.06	6.71	37.34	152	211	Peak
5917.65	51.99	50.14	73.62	-21.63	32.49	6.86	37.5	152	211	Peak
5972.75	53.85	51.88	68.2	-14.35	32.6	6.88	37.51	152	211	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
5625.05	51.85	50.37	68.2	-16.35	32.01	6.69	37.22	117	198	Peak
5657.35	51.7	50.27	73.66	-21.96	32.06	6.71	37.34	117	198	Peak
5918.6	52.57	50.72	72.92	-20.35	32.49	6.86	37.5	117	198	Peak
5981.775	55.44	53.47	68.2	-12.76	32.6	6.88	37.51	117	198	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
- The other emission levels were very low against the limit.

802.11n (HT20)

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.4	65.76	65.18	68.2	-2.44	31.56	6.34	37.32	136	283	Peak
5180	99.96	99.34			31.59	6.37	37.34	136	283	Average
5180	108.89	108.27			31.59	6.37	37.34	136	283	Peak
5365.73	52.65	51.64	68.2	-15.55	31.72	6.47	37.18	136	283	Peak
10360	53.47	56.23	68.2	-14.73	39.48	10.21	52.45	127	304	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
5141.3	67.95	67.36	68.2	-0.25	31.56	6.33	37.3	142	189	Peak
5180	100.66	100.04			31.59	6.37	37.34	142	189	Average
5180	108.7	108.08			31.59	6.37	37.34	142	189	Peak
5406.21	52.69	51.66	68.2	-15.51	31.74	6.47	37.18	142	189	Peak
10360	53.59	56.35	68.2	-14.61	39.48	10.21	52.45	126	207	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5147.42	62.81	62.23	68.2	-5.39	31.56	6.34	37.32	131	288	Peak
5200	100.09	99.46			31.6	6.39	37.36	131	288	Average
5200	109.95	109.32			31.6	6.39	37.36	131	288	Peak
5352.53	53	52.01	68.2	-15.2	31.7	6.47	37.18	131	288	Peak
10400	51.6	54.34	68.2	-16.6	39.51	10.2	52.45	156	67	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.22	63.73	63.15	68.2	-4.47	31.56	6.34	37.32	108	186	Peak
5200	102.79	102.16			31.6	6.39	37.36	108	186	Average
5200	111.36	110.73			31.6	6.39	37.36	108	186	Peak
5350.11	54.23	53.24	68.2	-13.97	31.7	6.47	37.18	108	186	Peak
10400	52.67	55.41	68.2	-15.53	39.51	10.2	52.45	155	221	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5200 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5087.84	53.01	52.48	68.2	-15.19	31.52	6.28	37.27	134	283	Peak
5240	102.25	101.53			31.62	6.42	37.32	134	283	Average
5240	110.86	110.14			31.62	6.42	37.32	134	283	Peak
5387.18	54.03	53.01	68.2	-14.17	31.73	6.47	37.18	134	283	Peak
10480	56.74	59.58	68.2	-11.46	39.6	10.22	52.66	168	206	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.76	51.89	51.31	68.2	-16.31	31.56	6.34	37.32	100	187	Peak
5240	103.54	102.82			31.62	6.42	37.32	100	187	Average
5240	112.08	111.36			31.62	6.42	37.32	100	187	Peak
5397.63	53.59	52.56	68.2	-14.61	31.74	6.47	37.18	100	187	Peak
10480	56.29	59.13	68.2	-11.91	39.6	10.22	52.66	114	38	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 52	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5107.82	51.49	50.93	68.2	-16.71	31.54	6.3	37.28	131	283	Peak
5260	103.08	102.27			31.65	6.43	37.27	131	283	Average
5260	111.86	111.05			31.65	6.43	37.27	131	283	Peak
5382.78	53.68	52.66	68.2	-14.52	31.73	6.47	37.18	131	283	Peak
10520	54.36	57.16	68.2	-13.84	39.66	10.27	52.73	175	148	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
5115.38	52.46	51.89	68.2	-15.74	31.54	6.31	37.28	122	196	Peak
5260	103.28	102.47			31.65	6.43	37.27	122	196	Average
5260	111.23	110.42			31.65	6.43	37.27	122	196	Peak
5413.91	54.42	53.37	68.2	-13.78	31.75	6.48	37.18	122	196	Peak
10520	53.93	56.73	68.2	-14.27	39.66	10.27	52.73	141	127	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
- The other emission levels were very low against the limit.

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

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.5	52.26	51.68	68.2	-15.94	31.56	6.34	37.32	140	283	Peak
5300	96.43	95.49			31.67	6.46	37.19	140	283	Average
5300	103.49	102.55			31.67	6.46	37.19	140	283	Peak
5350.77	63.89	62.9	68.2	-4.31	31.7	6.47	37.18	140	283	Peak
10600	55.5	58.33	68.2	-12.7	39.85	10.43	53.11	174	233	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
5147.78	52.66	52.08	68.2	-15.54	31.56	6.34	37.32	126	188	Peak
5300	103.23	102.29			31.67	6.46	37.19	126	188	Average
5300	111.64	110.7			31.67	6.46	37.19	126	188	Peak
5352.31	63.24	62.25	68.2	-4.96	31.7	6.47	37.18	126	188	Peak
10600	53.96	56.79	68.2	-14.24	39.85	10.43	53.11	151	190	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 64	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5023.4	51.87	51.4	68.2	-16.33	31.48	6.23	37.24	140	282	Peak
5320	99.54	98.59			31.68	6.46	37.19	140	282	Average
5320	108.68	107.73			31.68	6.46	37.19	140	282	Peak
5350.55	65.46	64.47	68.2	-2.74	31.7	6.47	37.18	140	282	Peak
10640	55.43	58.21	68.2	-12.77	39.93	10.36	53.07	206	188	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
5050.94	50.95	50.46	68.2	-17.25	31.49	6.25	37.25	124	183	Peak
5320	99.14	98.19			31.68	6.46	37.19	124	183	Average
5320	107.88	106.93			31.68	6.46	37.19	124	183	Peak
5350.33	67.38	66.39	68.2	-0.82	31.7	6.47	37.18	124	183	Peak
10640	54.84	57.62	68.2	-13.36	39.93	10.36	53.07	133	209	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 100	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5459.12	60.83	59.63	68.2	-7.37	31.77	6.51	37.08	112	241	Peak
5468.56	66.48	65.25	68.2	-1.72	31.79	6.52	37.08	112	241	Peak
5500	99.01	97.69			31.81	6.54	37.03	112	241	Average
5500	107.01	105.69			31.81	6.54	37.03	112	241	Peak
5727.48	51.37	49.86	68.2	-16.83	32.18	6.76	37.43	112	241	Peak
11000	57.02	58.92	68.2	-11.18	40.73	10.4	53.03	152	265	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.96	62.39	61.19	68.2	-5.81	31.77	6.51	37.08	116	332	Peak
5470	66.59	65.36	68.2	-1.61	31.79	6.52	37.08	116	332	Peak
5500	99.11	97.79			31.81	6.54	37.03	116	332	Average
5500	107.17	105.85			31.81	6.54	37.03	116	332	Peak
5728.68	51.79	50.28	68.2	-16.41	32.18	6.76	37.43	116	332	Peak
11000	55.66	57.56	68.2	-12.54	40.73	10.4	53.03	296	254	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
4. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 116	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5429.52	52.79	51.67	68.2	-15.41	31.76	6.49	37.13	117	233	Peak
5469.84	52.03	50.8	68.2	-16.17	31.79	6.52	37.08	117	233	Peak
5580	99.83	98.42			31.92	6.65	37.16	117	233	Average
5580	107.9	106.49			31.92	6.65	37.16	117	233	Peak
5729.88	51.88	50.37	68.2	-16.32	32.18	6.76	37.43	117	233	Peak
11160	56.75	58.45	68.2	-11.45	40.56	10.52	52.78	152	111	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
5429.36	52.3	51.18	68.2	-15.9	31.76	6.49	37.13	126	326	Peak
5465.52	51.6	50.37	68.2	-16.6	31.79	6.52	37.08	126	326	Peak
5580	101.48	100.07			31.92	6.65	37.16	126	326	Average
5580	108.06	106.65			31.92	6.65	37.16	126	326	Peak
5727	53.01	51.5	68.2	-15.19	32.18	6.76	37.43	126	326	Peak
11160	56.28	57.98	68.2	-11.92	40.56	10.52	52.78	252	123	Peak

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
4. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 140	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5392.24	52.54	51.52	68.2	-15.66	31.73	6.47	37.18	102	241	Peak
5467.6	50.49	49.26	68.2	-17.71	31.79	6.52	37.08	102	241	Peak
5700	98.93	97.48			32.12	6.73	37.4	102	241	Average
5700	107.8	106.35			32.12	6.73	37.4	102	241	Peak
5726.04	65.72	64.21	68.2	-2.48	32.18	6.76	37.43	102	241	Peak
11400	57.18	59.08	68.2	-11.02	40.33	10.47	52.7	252	111	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
5421.68	51.28	50.22	68.2	-16.92	31.75	6.49	37.18	121	316	Peak
5468.88	50.71	49.48	68.2	-17.49	31.79	6.52	37.08	121	316	Peak
5700	99.24	97.79			32.12	6.73	37.4	121	316	Average
5700	107.02	105.57			32.12	6.73	37.4	121	316	Peak
5725.48	66.9	65.39	68.2	-1.3	32.18	6.76	37.43	121	316	Peak
11400	55.76	57.66	68.2	-12.44	40.33	10.47	52.7	265	236	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 5700 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5745	99.84	98.32			32.21	6.78	37.47	117	238	Average
5745	107.78	106.26			32.21	6.78	37.47	117	238	Peak
11490	54.72	56.59	68.2	-13.48	40.25	10.66	52.78	222	256	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	104.06	102.54			32.21	6.78	37.47	108	221	Average
5745	109.06	107.54			32.21	6.78	37.47	108	221	Peak
11490	55.34	57.21	68.2	-12.86	40.25	10.66	52.78	203	251	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
5594.65	52.88	51.42	68.2	-15.32	31.95	6.67	37.16	117	238	Peak
5657.825	52.17	50.74	74.01	-21.84	32.06	6.71	37.34	117	238	Peak
5923.35	51.08	49.2	69.42	-18.34	32.52	6.86	37.5	117	238	Peak
5965.15	52.07	50.13	68.2	-16.13	32.57	6.88	37.51	117	238	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
5632.175	52.06	50.63	68.2	-16.14	32.01	6.7	37.28	108	221	Peak
5663.05	53.07	51.64	77.89	-24.82	32.06	6.71	37.34	108	221	Peak
5916.7	52.3	50.45	74.32	-22.02	32.49	6.86	37.5	108	221	Peak
5937.125	52.63	50.75	68.2	-15.57	32.52	6.86	37.5	108	221	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 157	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	100.94	99.4			32.26	6.82	37.54	121	208	Average
5785	108.99	107.45			32.26	6.82	37.54	121	208	Peak
11570	54.28	56.4	68.2	-13.92	40.13	10.76	53.01	152	111	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	102.05	100.51			32.26	6.82	37.54	132	196	Average
5785	109.89	108.35			32.26	6.82	37.54	132	196	Peak
11570	54.46	56.58	68.2	-13.74	40.13	10.76	53.01	232	256	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5634.075	53.3	51.84	68.2	-14.9	32.04	6.7	37.28	121	208	Peak
5659.25	51.94	50.51	75.07	-23.13	32.06	6.71	37.34	121	208	Peak
5920.025	52.27	50.42	71.87	-19.6	32.49	6.86	37.5	121	208	Peak
5967.525	53.39	51.45	68.2	-14.81	32.57	6.88	37.51	121	208	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
5642.625	53.88	52.42	68.2	-14.32	32.04	6.7	37.28	132	196	Peak
5654.025	51.24	49.81	71.19	-19.95	32.06	6.71	37.34	132	196	Peak
5920.025	51.64	49.79	71.87	-20.23	32.49	6.86	37.5	132	196	Peak
5934.275	53.78	51.9	68.2	-14.42	32.52	6.86	37.5	132	196	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 165	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	99.37	97.71			32.35	6.84	37.53	122	240	Average
5825	107.9	106.24			32.35	6.84	37.53	122	240	Peak
11650	55.34	57.65	68.2	-12.86	40.03	10.8	53.14	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5825	101	99.34			32.35	6.84	37.53	135	217	Average
5825	109	107.34			32.35	6.84	37.53	135	217	Peak
11650	55.34	57.65	68.2	-12.86	40.03	10.8	53.14	185	265	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5641.675	51.47	50.01	68.2	-16.73	32.04	6.7	37.28	122	240	Peak
5667.325	51.89	50.43	81.06	-29.17	32.09	6.71	37.34	122	240	Peak
5914.325	52.08	50.23	76.07	-23.99	32.49	6.86	37.5	122	240	Peak
5930.95	50.63	48.75	68.2	-17.57	32.52	6.86	37.5	122	240	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
5610.8	52.89	51.44	68.2	-15.31	31.98	6.69	37.22	135	217	Peak
5656.4	51.37	49.94	72.95	-21.58	32.06	6.71	37.34	135	217	Peak
5921.925	52.15	50.27	70.47	-18.32	32.52	6.86	37.5	135	217	Peak
5970.85	53.19	51.25	68.2	-15.01	32.57	6.88	37.51	135	217	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
- The other emission levels were very low against the limit.

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5146.52	64.78	64.2	68.2	-3.42	31.56	6.34	37.32	133	283	Peak
5190	95.97	95.34			31.59	6.38	37.34	133	283	Average
5190	104.24	103.61			31.59	6.38	37.34	133	283	Peak
5419.85	53.13	52.08	68.2	-15.07	31.75	6.48	37.18	133	283	Peak
10380	56.38	59.12	68.2	-11.82	39.5	10.21	52.45	115	97	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
5146.52	65.83	65.25	68.2	-2.37	31.56	6.34	37.32	122	187	Peak
5190	97.47	96.84			31.59	6.38	37.34	122	187	Average
5190	105.36	104.73			31.59	6.38	37.34	122	187	Peak
5413.03	52.1	51.05	68.2	-16.1	31.75	6.48	37.18	122	187	Peak
10380	55.23	57.97	68.2	-12.97	39.5	10.21	52.45	140	196	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 46	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5146.16	58.94	58.36	68.2	-9.26	31.56	6.34	37.32	135	283	Peak
5230	96.38	95.67			31.62	6.41	37.32	135	283	Average
5230	104.65	103.94			31.62	6.41	37.32	135	283	Peak
5365.84	53.49	52.48	68.2	-14.71	31.72	6.47	37.18	135	283	Peak
10460	56.16	58.96	68.2	-12.04	39.57	10.22	52.59	133	284	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.22	62.32	61.74	68.2	-5.88	31.56	6.34	37.32	100	190	Peak
5230	97.43	96.72			31.62	6.41	37.32	100	190	Average
5230	106.12	105.41			31.62	6.41	37.32	100	190	Peak
5446.25	53.15	52.01	68.2	-15.05	31.77	6.5	37.13	100	190	Peak
10460	54.85	57.65	68.2	-13.35	39.57	10.22	52.59	112	103	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 54	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5070.02	50.95	50.44	68.2	-17.25	31.51	6.27	37.27	135	232	Peak
5270	93.11	92.29			31.65	6.44	37.27	135	232	Average
5270	101.14	100.32			31.65	6.44	37.27	135	232	Peak
5352.75	54.59	53.6	68.2	-13.61	31.7	6.47	37.18	135	232	Peak
10540	54.89	57.74	68.2	-13.31	39.7	10.31	52.86	121	319	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
5143.64	52.12	51.53	68.2	-16.08	31.56	6.33	37.3	108	334	Peak
5270	94.34	93.52			31.65	6.44	37.27	108	334	Average
5270	102.45	101.63			31.65	6.44	37.27	108	334	Peak
5355.61	56.83	55.84	68.2	-11.37	31.7	6.47	37.18	108	334	Peak
10540	53.91	56.76	68.2	-14.29	39.7	10.31	52.86	155	277	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 62	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5081.9	51.37	50.84	68.2	-16.83	31.52	6.28	37.27	156	205	Peak
5310	93.17	92.22			31.68	6.46	37.19	156	205	Average
5310	101.6	100.65			31.68	6.46	37.19	156	205	Peak
5350.11	64.86	63.87	68.2	-3.34	31.7	6.47	37.18	156	205	Peak
10620	55.6	58.41	68.2	-12.6	39.89	10.39	53.09	141	42	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5148.32	52.09	51.51	68.2	-16.11	31.56	6.34	37.32	128	345	Peak
5310	94.5	93.55			31.68	6.46	37.19	128	345	Average
5310	102.76	101.81			31.68	6.46	37.19	128	345	Peak
5350.77	65.47	64.48	68.2	-2.73	31.7	6.47	37.18	128	345	Peak
10620	55.94	58.75	68.2	-12.26	39.89	10.39	53.09	182	94	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 102	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.64	57.72	56.52	68.2	-10.48	31.77	6.51	37.08	107	239	Peak
5469.2	63.02	61.79	68.2	-5.18	31.79	6.52	37.08	107	239	Peak
5510	92.55	91.25			31.81	6.55	37.06	107	239	Average
5510	100.54	99.24			31.81	6.55	37.06	107	239	Peak
5726.04	51.28	49.77	68.2	-16.92	32.18	6.76	37.43	107	239	Peak
11020	52.68	54.51	68.2	-15.52	40.71	10.41	52.95	251	145	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5458.8	60.42	59.22	68.2	-7.78	31.77	6.51	37.08	136	335	Peak
5469.68	65.84	64.61	68.2	-2.36	31.79	6.52	37.08	136	335	Peak
5510	95.21	93.91			31.81	6.55	37.06	136	335	Average
5510	103.11	101.81			31.81	6.55	37.06	136	335	Peak
5724.92	50.42	48.91	68.2	-17.78	32.18	6.76	37.43	136	335	Peak
11020	56.55	58.38	68.2	-11.65	40.71	10.41	52.95	265	222	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 110	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5430.32	53.27	52.15	68.2	-14.93	31.76	6.49	37.13	113	235	Peak
5467.44	50.45	49.22	68.2	-17.75	31.79	6.52	37.08	113	235	Peak
5580	100.78	99.37			31.92	6.65	37.16	113	235	Average
5580	108.78	107.37			31.92	6.65	37.16	113	235	Peak
5728.68	53.21	51.7	68.2	-14.99	32.18	6.76	37.43	113	235	Peak
11100	58.68	60.38	68.2	-9.52	40.56	10.52	52.78	251	123	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
5427.92	51.34	50.23	68.2	-16.86	31.75	6.49	37.13	106	320	Peak
5460.4	50.7	49.5	68.2	-17.5	31.77	6.51	37.08	106	320	Peak
5580	100.72	99.31			31.92	6.65	37.16	106	320	Average
5580	109.51	108.1			31.92	6.65	37.16	106	320	Peak
5726.12	52.99	51.48	68.2	-15.21	32.18	6.76	37.43	106	320	Peak
11100	60.34	62.04	68.2	-7.86	40.56	10.52	52.78	231	256	Peak

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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 134	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5446.8	51.09	49.95	68.2	-17.11	31.77	6.5	37.13	110	238	Peak
5469.84	50.62	49.39	68.2	-17.58	31.79	6.52	37.08	110	238	Peak
5670	94.39	92.92			32.09	6.72	37.34	110	238	Average
5670	102.34	100.87			32.09	6.72	37.34	110	238	Peak
5727.56	56.81	55.3	68.2	-11.39	32.18	6.76	37.43	110	238	Peak
11340	57.15	58.95	68.2	-11.05	40.4	10.52	52.72	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5407.12	51.93	50.9	68.2	-16.27	31.74	6.47	37.18	126	333	Peak
5467.76	51.68	50.45	68.2	-16.52	31.79	6.52	37.08	126	333	Peak
5670	93	91.53			32.09	6.72	37.34	126	333	Average
5670	100.99	99.52			32.09	6.72	37.34	126	333	Peak
5728.44	54.64	53.13	68.2	-13.56	32.18	6.76	37.43	126	333	Peak
11340	55.54	57.34	68.2	-12.66	40.4	10.52	52.72	185	265	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 5670 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

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

<Spurious Emission>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	94.25	92.7			32.23	6.79	37.47	119	239	Average
5755	102.09	100.54			32.23	6.79	37.47	119	239	Peak
11510	56.48	58.37	68.2	-11.72	40.23	10.69	52.81	252	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5755	94.27	92.72			32.23	6.79	37.47	133	191	Average
5755	102.62	101.07			32.23	6.79	37.47	133	191	Peak
11510	55.08	56.97	68.2	-13.12	40.23	10.69	52.81	251	236	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
5607	52.3	50.86	68.2	-15.9	31.98	6.68	37.22	119	239	Peak
5656.4	53.09	51.66	72.95	-19.86	32.06	6.71	37.34	119	239	Peak
5922.875	51.35	49.47	69.77	-18.42	32.52	6.86	37.5	119	239	Peak
5983.2	51.99	50.02	68.2	-16.21	32.6	6.88	37.51	119	239	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
5607	52.76	51.32	68.2	-15.44	31.98	6.68	37.22	133	191	Peak
5653.55	54.62	53.13	70.84	-16.22	32.06	6.71	37.28	133	191	Peak
5918.6	51.91	50.06	72.92	-21.01	32.49	6.86	37.5	133	191	Peak
5958.025	53.06	51.12	68.2	-15.14	32.57	6.87	37.5	133	191	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
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 159	Frequency Range	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

<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	94.24	92.66			32.29	6.83	37.54	149	206	Average
5795	102.57	100.99			32.29	6.83	37.54	149	206	Peak
11590	53.81	55.93	68.2	-14.39	40.11	10.78	53.01	152	111	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	95.25	93.67			32.29	6.83	37.54	122	194	Average
5795	104.07	102.49			32.29	6.83	37.54	122	194	Peak
11590	53.61	55.73	68.2	-14.59	40.11	10.78	53.01	203	256	Peak

<Out of Band Emission (OOBE)>

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5617.925	52.62	51.14	68.2	-15.58	32.01	6.69	37.22	149	206	Peak
5650.7	52.93	51.44	68.72	-15.79	32.06	6.71	37.28	149	206	Peak
5923.825	51.41	49.53	69.07	-17.66	32.52	6.86	37.5	149	206	Peak
5954.7	52.58	50.66	68.2	-15.62	32.55	6.87	37.5	149	206	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
5628.375	52.54	51.12	68.2	-15.66	32.01	6.69	37.28	122	194	Peak
5656.875	52.47	51.04	73.31	-20.84	32.06	6.71	37.34	122	194	Peak
5920.975	52.05	50.2	71.17	-19.12	32.49	6.86	37.5	122	194	Peak
5939.5	54.05	52.13	68.2	-14.15	32.55	6.87	37.5	122	194	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5146.16	67.54	66.96	68.2	-0.66	31.56	6.34	37.32	133	284	Peak
5210	93.01	92.36			31.61	6.4	37.36	133	284	Average
5210	100.9	100.25			31.61	6.4	37.36	133	284	Peak
5370.02	55.29	54.28	68.2	-12.91	31.72	6.47	37.18	133	284	Peak
10420	55.45	58.16	68.2	-12.75	39.53	10.21	52.45	117	182	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5149.04	67.41	66.83	68.2	-0.79	31.56	6.34	37.32	121	187	Peak
5210	94.81	94.16			31.61	6.4	37.36	121	187	Average
5210	102.44	101.79			31.61	6.4	37.36	121	187	Peak
5389.49	55.62	54.6	68.2	-12.58	31.73	6.47	37.18	121	187	Peak
10420	54.59	57.3	68.2	-13.61	39.53	10.21	52.45	108	115	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5146.16	52.64	52.06	68.2	-15.56	31.56	6.34	37.32	150	205	Peak
5290	91.56	90.68			31.66	6.45	37.23	150	205	Average
5290	99.54	98.66			31.66	6.45	37.23	150	205	Peak
5357.48	65.73	64.74	68.2	-2.47	31.7	6.47	37.18	150	205	Peak
10580	56.38	59.29	68.2	-11.82	39.81	10.39	53.11	114	306	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
5147.78	54.22	53.64	68.2	-13.98	31.56	6.34	37.32	123	337	Peak
5290	91.69	90.81			31.66	6.45	37.23	123	337	Average
5290	99.87	98.99			31.66	6.45	37.23	123	337	Peak
5352.2	66.95	65.96	68.2	-1.25	31.7	6.47	37.18	123	337	Peak
10580	53.66	56.57	68.2	-14.54	39.81	10.39	53.11	163	203	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5457.36	63.14	61.94	68.2	-5.06	31.77	6.51	37.08	105	238	Peak
5467.76	65.35	64.12	68.2	-2.85	31.79	6.52	37.08	105	238	Peak
5530	92.26	90.93			31.84	6.58	37.09	105	238	Average
5530	100.5	99.17			31.84	6.58	37.09	105	238	Peak
5727.64	52.54	51.03	68.2	-15.66	32.18	6.76	37.43	105	238	Peak
11060	55.54	57.23	68.2	-12.66	40.66	10.44	52.79	251	123	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
5459.12	66.57	65.37	68.2	-1.63	31.77	6.51	37.08	120	337	Peak
5468.72	66.69	65.46	68.2	-1.51	31.79	6.52	37.08	120	337	Peak
5530	93.74	92.41			31.84	6.58	37.09	120	337	Average
5530	101.79	100.46			31.84	6.58	37.09	120	337	Peak
5727.32	51.2	49.69	68.2	-17	32.18	6.76	37.43	120	337	Peak
11060	55.9	57.59	68.2	-12.3	40.66	10.44	52.79	211	251	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
- The other emission levels were very low against the limit.

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	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5449.84	55.89	54.7	68.2	-12.31	31.77	6.5	37.08	100	239	Peak
5462	56.48	55.28	68.2	-11.72	31.77	6.51	37.08	100	239	Peak
5610	91.9	90.46			31.98	6.68	37.22	100	239	Average
5610	100.1	98.66			31.98	6.68	37.22	100	239	Peak
5725.16	54.68	53.17	68.2	-13.52	32.18	6.76	37.43	100	239	Peak
11220	55.81	57.56	68.2	-12.39	40.51	10.55	52.81	251	145	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
5453.2	57.61	56.41	68.2	-10.59	31.77	6.51	37.08	124	332	Peak
5468.72	59.92	58.69	68.2	-8.28	31.79	6.52	37.08	124	332	Peak
5610	91.69	90.25			31.98	6.68	37.22	124	332	Average
5610	99.73	98.29			31.98	6.68	37.22	124	332	Peak
5725.24	53.78	52.27	68.2	-14.42	32.18	6.76	37.43	124	332	Peak
11220	55.87	57.62	68.2	-12.33	40.51	10.55	52.81	136	251	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 5610 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

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	Jisyong Wang

<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	94.78	93.21			32.26	6.81	37.5	158	210	Average
5775	102.83	101.26			32.26	6.81	37.5	158	210	Peak
11550	51.63	53.67	68.2	-16.57	40.16	10.74	52.94	152	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
5775	93.37	91.8			32.26	6.81	37.5	141	190	Average
5775	101.46	99.89			32.26	6.81	37.5	141	190	Peak
11550	54.91	56.95	68.2	-13.29	40.16	10.74	52.94	252	236	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
5624.1	61.49	60.01	68.2	-6.71	32.01	6.69	37.22	158	210	Peak
5656.4	62.75	61.32	72.95	-10.2	32.06	6.71	37.34	158	210	Peak
5920.025	56.57	54.72	71.87	-15.3	32.49	6.86	37.5	158	210	Peak
5926.2	55.37	53.49	68.2	-12.83	32.52	6.86	37.5	158	210	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
5624.1	59.13	57.65	68.2	-9.07	32.01	6.69	37.22	141	190	Peak
5658.775	62.3	60.87	74.72	-12.42	32.06	6.71	37.34	141	190	Peak
5923.35	55.8	53.92	69.42	-13.62	32.52	6.86	37.5	141	190	Peak
5929.525	56.71	54.83	68.2	-11.49	32.52	6.86	37.5	141	190	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
- The other emission levels were very low against the limit.

9 kHz ~ 30 MHz Data:

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

30 MHz ~ 1 GHz Worst-Case Data:

Mode A

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 100	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	Jisyoung Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	32.49	49.52	40	-7.51	13.6	0.51	31.14	102	251	Peak
169.68	29.51	48.41	43.5	-13.99	11.76	1.07	31.73	165	295	Peak
252.13	17.87	36.78	46	-28.13	11.54	1.47	31.92	285	132	Peak
712.88	28.79	36.15	46	-17.21	21	3.36	31.72	147	285	Peak
848.68	32.47	37.65	46	-13.53	22.85	3.83	31.86	165	295	Peak
958.29	28.28	32.08	46	-17.72	23.84	4.27	31.91	132	214	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
60.07	27.12	45.96	40	-12.88	11.94	0.58	31.36	152	111	Peak
165.8	30.25	48.84	43.5	-13.25	12.15	1.05	31.79	132	265	Peak
353.01	17.67	33.44	46	-28.33	14.22	1.89	31.88	205	285	Peak
566.41	21.2	31.67	46	-24.8	18.84	2.76	32.07	141	111	Peak
650.8	23.9	32.57	46	-22.1	20.22	3.12	32.01	205	251	Peak
925.31	27.57	31.76	46	-18.43	23.65	4.15	31.99	111	165	Peak

Remarks:

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

Mode B

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 64	Frequency Range	30 MHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	32.49	49.52	40	-7.51	13.6	0.51	31.14	145	258	Peak
60.07	27.12	45.96	40	-12.88	11.94	0.58	31.36	102	231	Peak
153.19	33.22	51.2	43.5	-10.28	12.72	0.99	31.69	185	265	Peak
573.2	23.32	33.63	46	-22.68	18.99	2.79	32.09	198	111	Peak
920.46	29.19	33.44	46	-16.81	23.62	4.13	32	203	256	Peak
961.2	29.92	33.7	54	-24.08	23.85	4.29	31.92	165	285	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
45.52	31.09	48.24	40	-8.91	13.5	0.51	31.16	152	111	Peak
64.92	17.91	37.54	40	-22.09	11.35	0.61	31.59	203	256	Peak
165.8	30.25	48.84	43.5	-13.25	12.15	1.05	31.79	295	256	Peak
478.14	20.11	32.68	46	-25.89	16.89	2.4	31.86	111	147	Peak
615.88	22.92	32.28	46	-23.08	19.8	2.97	32.13	302	214	Peak
916.58	27.41	31.72	46	-18.59	23.6	4.11	32.02	111	152	Peak

Remarks:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Sep. 05, 2017	Sep. 04, 2018
LISN/AMN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
LISN/AMN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 15, 2017	Aug. 14, 2018
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

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

4.2.3 Test Procedures

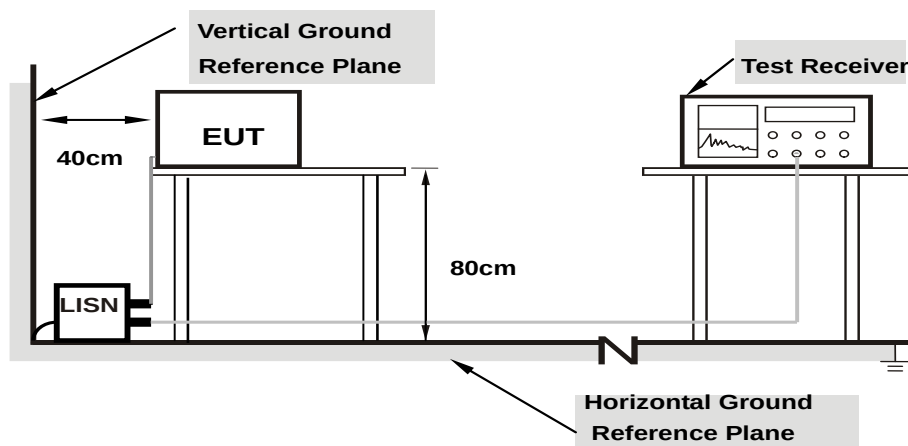
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

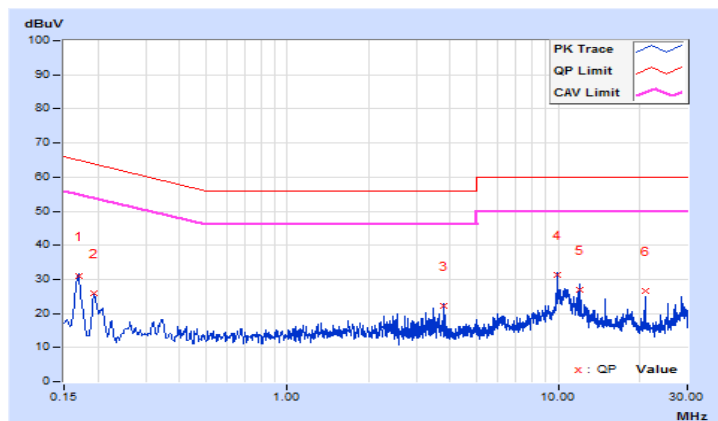
4.2.7 Test Results

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	Getaz Yang	Test Date	2018/6/6

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16967	10.10	20.72	8.75	30.82	18.85	64.98	54.98	-34.16	-36.13
2	0.19305	10.10	15.77	4.37	25.87	14.47	63.90	53.90	-38.03	-39.43
3	3.77066	10.27	11.90	0.79	22.17	11.06	56.00	46.00	-33.83	-34.94
4	9.89763	10.61	20.71	6.30	31.32	16.91	60.00	50.00	-28.68	-33.09
5	11.95429	10.74	16.12	2.06	26.86	12.80	60.00	50.00	-33.14	-37.20
6	20.94729	11.23	15.44	3.27	26.67	14.50	60.00	50.00	-33.33	-35.50

Remarks:

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

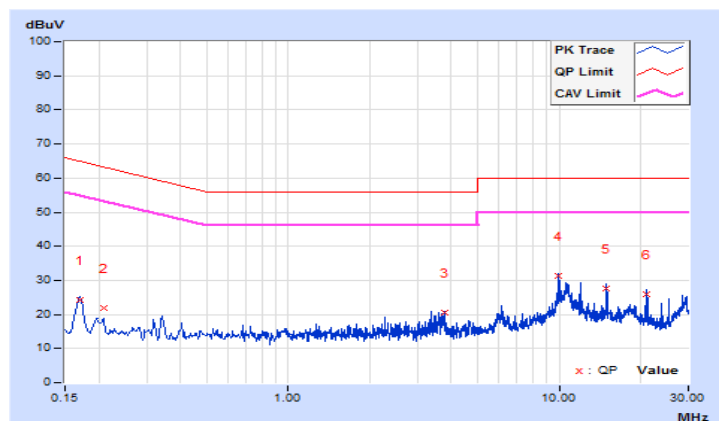


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Getaz Yang	Test Date	2018/6/6

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16955	10.10	14.04	2.90	24.14	13.00	64.98	54.98	-40.84	-41.98
2	0.20838	10.10	11.71	0.47	21.81	10.57	63.27	53.27	-41.46	-42.70
3	3.77066	10.26	10.22	0.08	20.48	10.34	56.00	46.00	-35.52	-35.66
4	9.89763	10.51	20.65	6.32	31.16	16.83	60.00	50.00	-28.84	-33.17
5	14.96108	10.73	16.94	1.58	27.67	12.31	60.00	50.00	-32.33	-37.69
6	20.94338	10.95	15.03	0.87	25.98	11.82	60.00	50.00	-34.02	-38.18

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

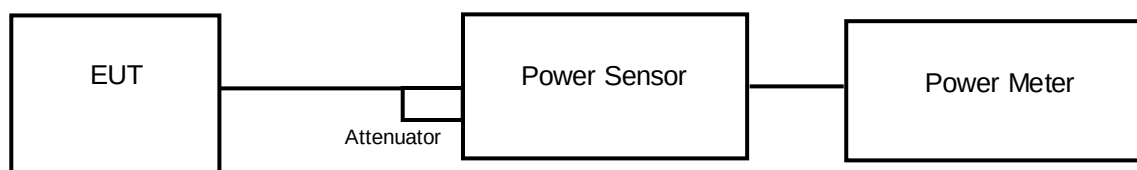
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

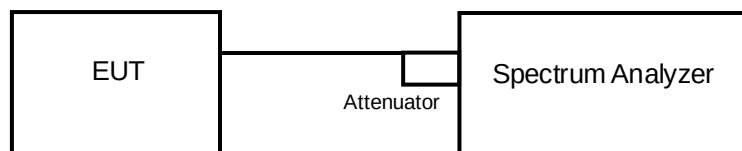
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

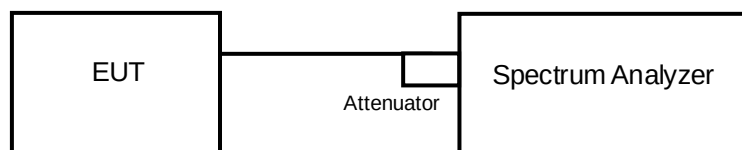
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

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

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

<802.11ac (VHT80)>

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

26 dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Results

Power Output:

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	23.388	13.69	24	Pass
40	5200	58.614	17.68	24	Pass
48	5240	58.479	17.67	24	Pass
52	5260	59.156	17.72	24	Pass
60	5300	59.704	17.76	24	Pass
64	5320	34.277	15.35	24	Pass
100	5500	31.261	14.95	24	Pass
116	5580	60.674	17.83	24	Pass
140	5700	24.774	13.94	24	Pass
149	5745	62.806	17.98	30	Pass
157	5785	62.23	17.94	30	Pass
165	5825	60.534	17.82	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (23.22) = 24.66 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (23.39) = 24.69 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.41) = 24.31 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.59) = 24.34 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (23.28) = 24.67 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.53) = 24.33 \text{ dBm} > 24 \text{ dBm}$.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	27.669	14.42	24	Pass
40	5200	57.148	17.57	24	Pass
48	5240	60.256	17.80	24	Pass
52	5260	61.944	17.92	24	Pass
60	5300	60.814	17.84	24	Pass
64	5320	27.479	14.39	24	Pass
100	5500	29.648	14.72	24	Pass
116	5580	58.614	17.68	24	Pass
140	5700	39.811	16.00	24	Pass
149	5745	61.518	17.89	30	Pass
157	5785	62.373	17.95	30	Pass
165	5825	60.117	17.79	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (27.46) = 25.39 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (28.52) = 25.55 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.70) = 24.36 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.63) = 24.35 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (27.40) = 25.38 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.88) = 24.40 \text{ dBm} > 24 \text{ dBm}$.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	21.528	13.33	24	Pass
46	5230	25.061	13.99	24	Pass
54	5270	24.831	13.95	24	Pass
62	5310	24.491	13.89	24	Pass
102	5510	21.979	13.42	24	Pass
110	5550	21.577	13.34	24	Pass
134	5670	24.946	13.97	24	Pass
151	5755	22.699	13.56	30	Pass
159	5795	23.768	13.76	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (41.22) = 27.15 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (41.51) = 27.18 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (41.31) = 27.16 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (41.05) = 27.13 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (40.97) = 27.12 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	16.982	12.30	24	Pass
58	5290	20.845	13.19	24	Pass
106	5530	14.588	11.64	24	Pass
122	5610	36.983	15.68	24	Pass
155	5775	38.548	15.86	30	Pass

Note:

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

1. $11 \text{ dBm} + 10\log (81.37) = 30.10 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (81.88) = 30.13 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (82.21) = 30.15 \text{ dBm} > 24 \text{ dBm}$.

26 dB Bandwidth:
802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	21.58
40	5200	22.90
48	5240	23.62
52	5260	23.22
60	5300	23.39
64	5320	21.41
100	5500	21.59
116	5580	23.28
140	5700	21.53

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
36	5180	21.84
40	5200	27.16
48	5240	27.61
52	5260	27.46
60	5300	28.52
64	5320	21.70
100	5500	21.63
116	5580	27.40
140	5700	21.88

802.11n (HT40)

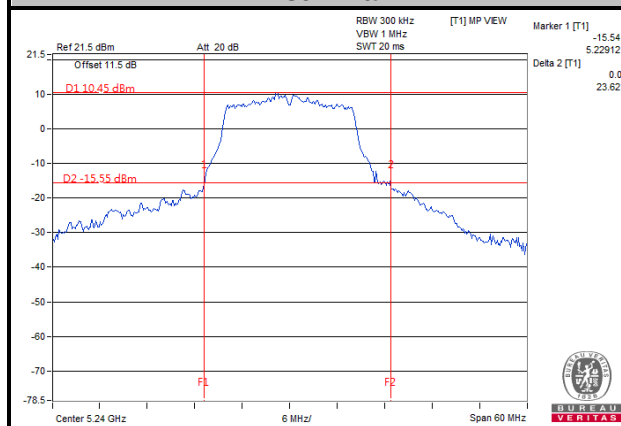
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
38	5190	41.21
46	5230	47.50
54	5270	41.22
62	5310	41.51
102	5510	41.31
110	5550	41.05
134	5670	40.97

802.11ac (VHT80)

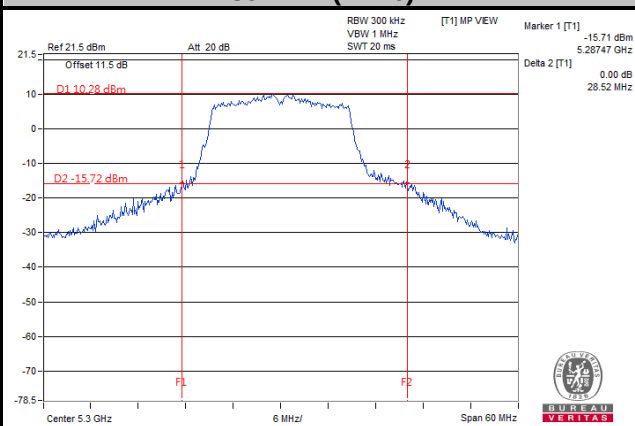
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)
42	5210	81.60
58	5290	81.37
106	5530	81.88
122	5610	82.21

Spectrum Plot of Worst Value

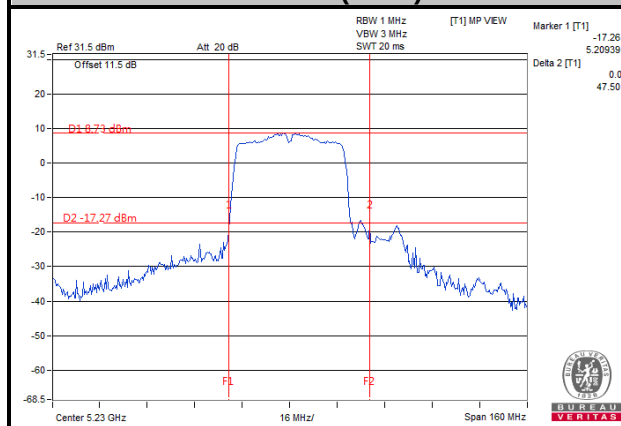
802.11a



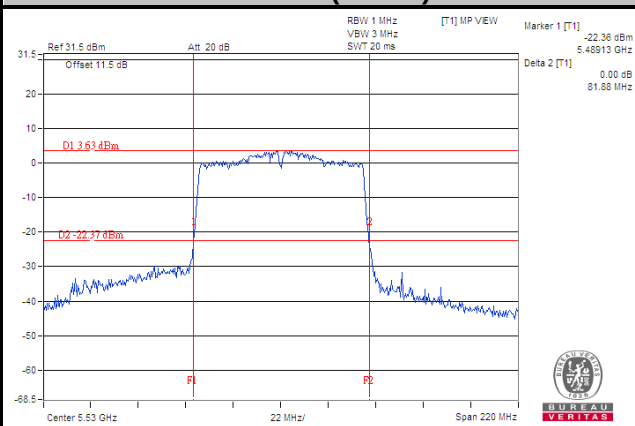
802.11n (HT20)



802.11n (HT40)

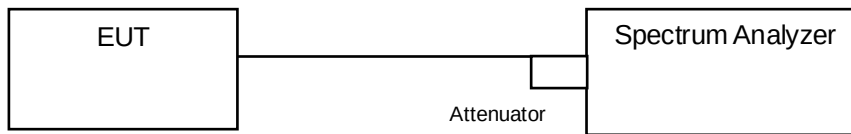


802.11ac (VHT80)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.80
40	5200	17.16
48	5240	17.16
52	5260	17.16
60	5300	17.16
64	5320	16.92
100	5500	16.92
116	5580	17.28
140	5700	16.68
149	5745	17.52
157	5785	17.76
165	5825	17.76

802.11n (HT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.12
40	5200	18.24
48	5240	18.36
52	5260	18.36
60	5300	18.36
64	5320	17.88
100	5500	17.88
116	5580	18.12
140	5700	17.88
149	5745	18.36
157	5785	18.36
165	5825	18.36

802.11n (HT40)

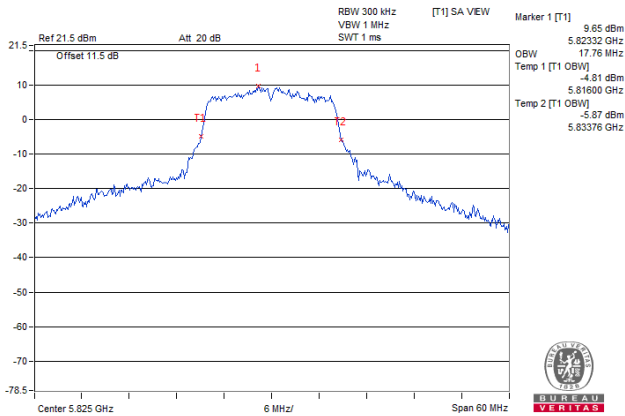
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.36
46	5230	36.60
54	5270	36.60
62	5310	36.60
102	5510	36.60
110	5550	36.48
134	5670	36.60
151	5755	36.48
159	5795	36.48

802.11ac (VHT80)

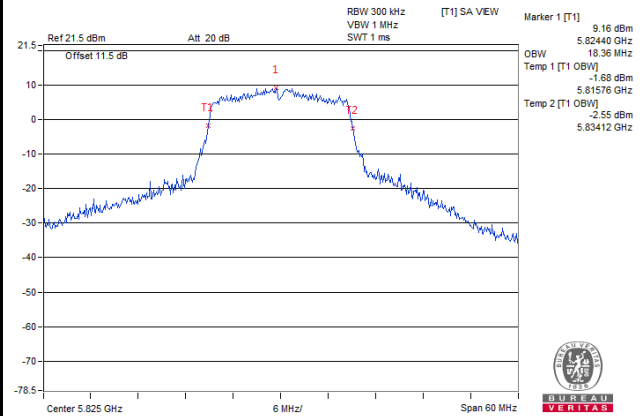
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.60
58	5290	75.60
106	5530	75.84
122	5610	75.60
155	5775	75.60

Spectrum Plot of Worst Value

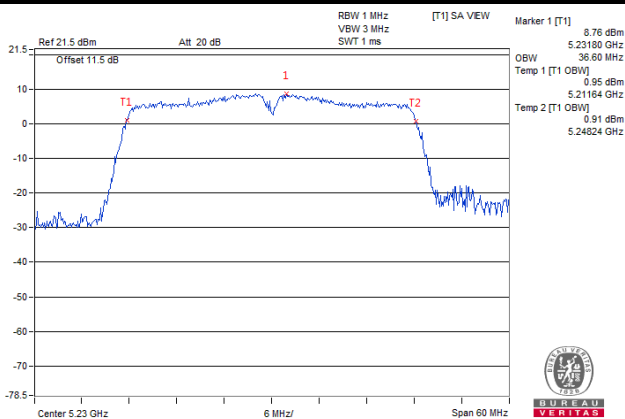
802.11a



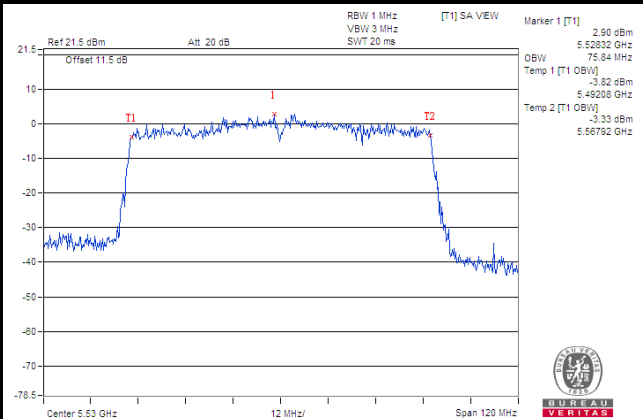
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

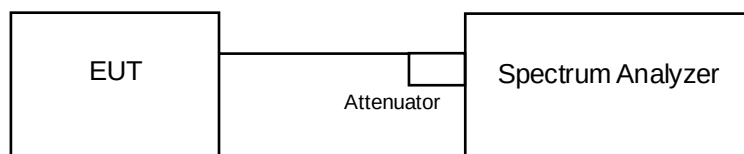


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 Test Procedures

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

Using method SA-2

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

※For U-NII-3:

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

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

4.5.7 Test Results

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

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor (dB)	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
36	5180	0.54	0.33	0.87	11	Pass
40	5200	6.46	0.33	6.79	11	Pass
48	5240	6.39	0.33	6.72	11	Pass
52	5260	6.84	0.33	7.17	11	Pass
60	5300	6.72	0.33	7.05	11	Pass
64	5320	2.55	0.33	2.88	11	Pass
100	5500	2.21	0.33	2.54	11	Pass
116	5580	7.05	0.33	7.38	11	Pass
140	5700	1.13	0.33	1.46	11	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor (dB)	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
36	5180	1.13	0.32	1.45	11	Pass
40	5200	6.23	0.32	6.55	11	Pass
48	5240	6.37	0.32	6.69	11	Pass
52	5260	6.87	0.32	7.19	11	Pass
60	5300	6.75	0.32	7.07	11	Pass
64	5320	1.39	0.32	1.71	11	Pass
100	5500	1.81	0.32	2.13	11	Pass
116	5580	6.53	0.32	6.85	11	Pass
140	5700	3.23	0.32	3.55	11	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor (dB)	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
38	5190	-4.39	0.68	-3.71	11	Pass
46	5230	-0.46	0.68	0.22	11	Pass
54	5270	-0.71	0.68	-0.03	11	Pass
62	5310	-0.73	0.68	-0.05	11	Pass
102	5510	-0.37	0.68	0.31	11	Pass
110	5550	-0.33	0.68	0.35	11	Pass
134	5670	-0.45	0.68	0.23	11	Pass

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

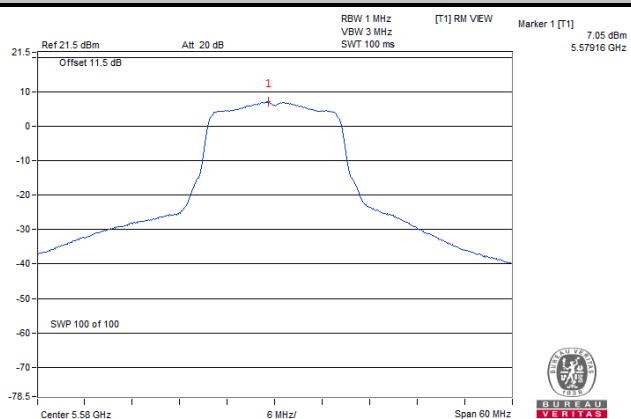
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor (dB)	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
42	5210	-8.32	1.29	-7.03	11	Pass
58	5290	-6.23	1.29	-4.94	11	Pass
106	5530	-7.92	1.29	-6.63	11	Pass
122	5610	-1.53	1.29	-0.24	11	Pass

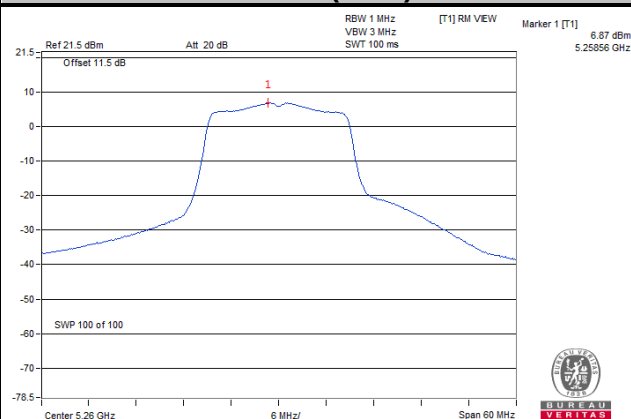
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

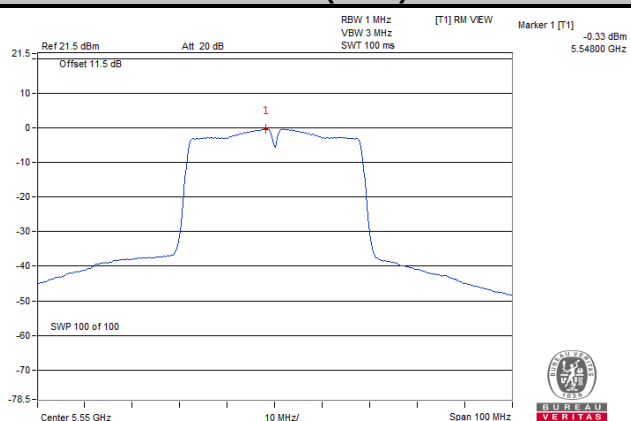
802.11a



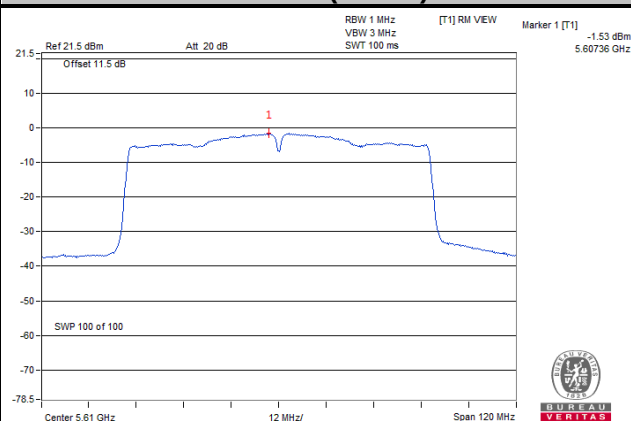
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/300 kHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
149	5745	2.46	4.68	0.33	5.01	30	Pass
157	5785	2.15	4.37	0.33	4.70	30	Pass
165	5825	2.28	4.50	0.33	4.83	30	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/300 kHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
149	5745	1.73	3.95	0.32	4.27	30	Pass
157	5785	1.50	3.72	0.32	4.04	30	Pass
165	5825	1.75	3.97	0.32	4.29	30	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/300 kHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
151	5755	-6.10	-3.88	0.68	-3.20	30	Pass
159	5795	-6.18	-3.96	0.68	-3.28	30	Pass

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

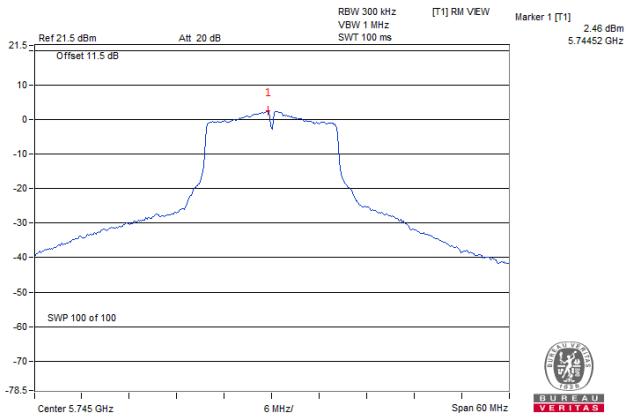
802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm/300 kHz)	PSD w/o Duty Factor (dBm/500 kHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
155	5775	-7.53	-5.31	1.29	-4.02	30	Pass

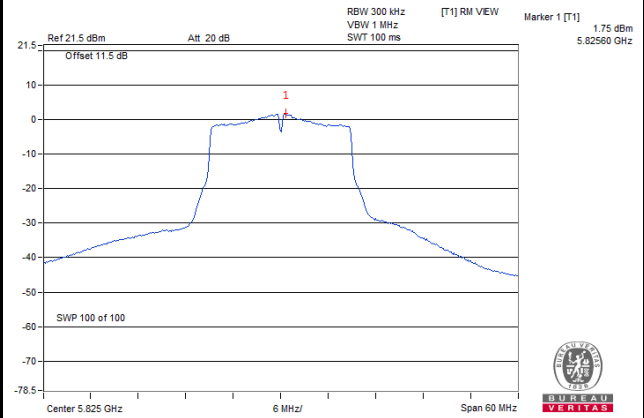
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

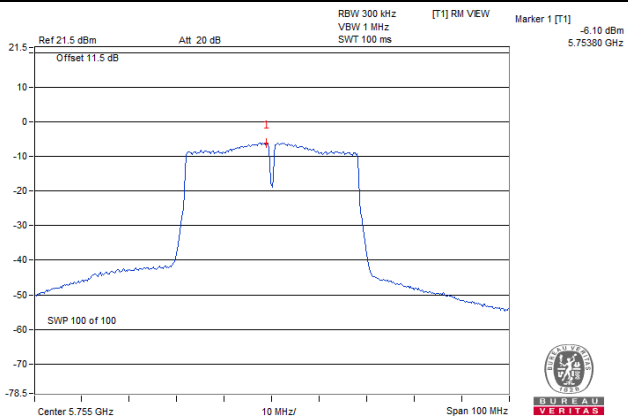
802.11a



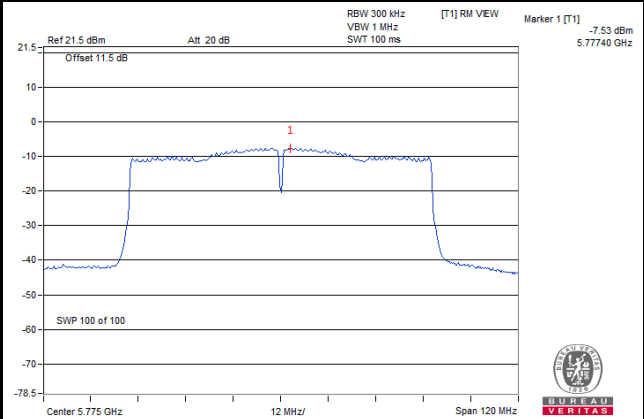
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

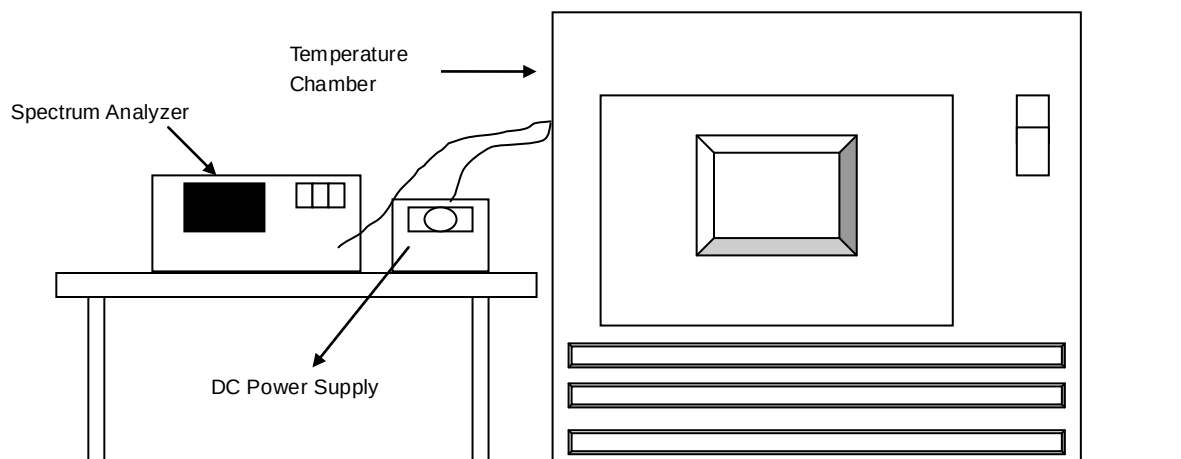


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	120	5179.9777	-4.31000	5179.9759	-4.65000	5179.9788	-4.09000	5179.9766	-4.52000
40	120	5180.0207	4.00000	5180.0228	4.40000	5180.0189	3.65000	5180.0186	3.59000
30	120	5179.9924	-1.47000	5179.9946	-1.04000	5179.9927	-1.41000	5179.9906	-1.81000
20	120	5179.9878	-2.36000	5179.9856	-2.78000	5179.9849	-2.92000	5179.9855	-2.80000
10	120	5179.9881	-2.30000	5179.9913	-1.68000	5179.9921	-1.53000	5179.9876	-2.39000
0	120	5180.0129	2.49000	5180.0121	2.34000	5180.0136	2.63000	5180.0117	2.26000
-10	120	5179.9845	-2.99000	5179.9871	-2.49000	5179.9862	-2.66000	5179.985	-2.90000
-20	120	5180.0029	0.56000	5180.0031	0.60000	5179.9985	-0.29000	5180.0005	0.10000
-30	120	5180.0217	4.19000	5180.0186	3.59000	5180.0174	3.36000	5180.0196	3.78000

Frequency Stability Versus Temp.									
Operating Frequency: 5180 MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	138	5179.9869	-2.53000	5179.9852	-2.86000	5179.984	-3.09000	5179.9856	-2.78000
	120	5179.9878	-2.36000	5179.9856	-2.78000	5179.9849	-2.92000	5179.9855	-2.80000
	102	5179.9869	-2.53000	5179.9853	-2.84000	5179.985	-2.90000	5179.9863	-2.64000

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.14	0.5	Pass
157	5785	16.31	0.5	Pass
165	5825	16.32	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.31	0.5	Pass
157	5785	17.11	0.5	Pass
165	5825	17.07	0.5	Pass

802.11n (HT40)

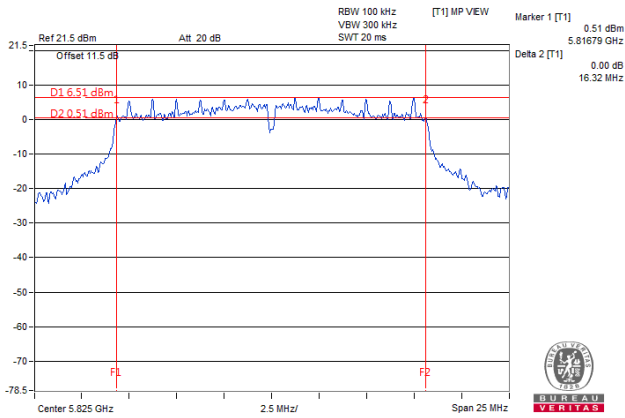
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.15	0.5	Pass
159	5795	36.08	0.5	Pass

802.11ac (VHT80)

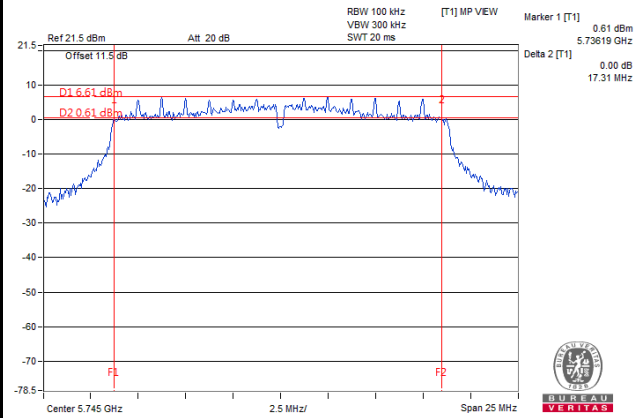
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.54	0.5	Pass

Spectrum Plot of Worst Value

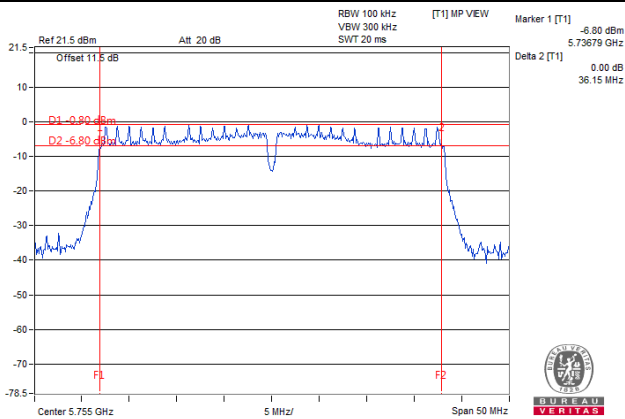
802.11a



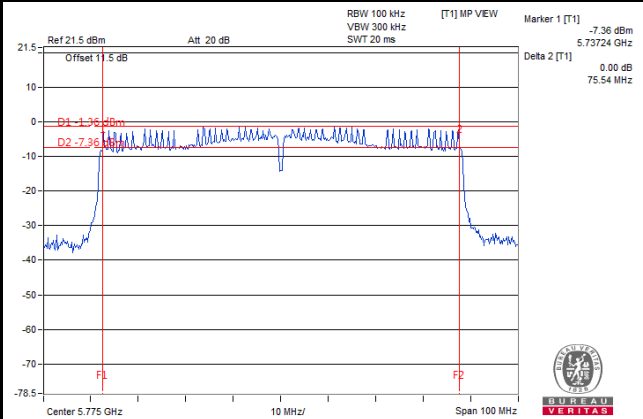
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



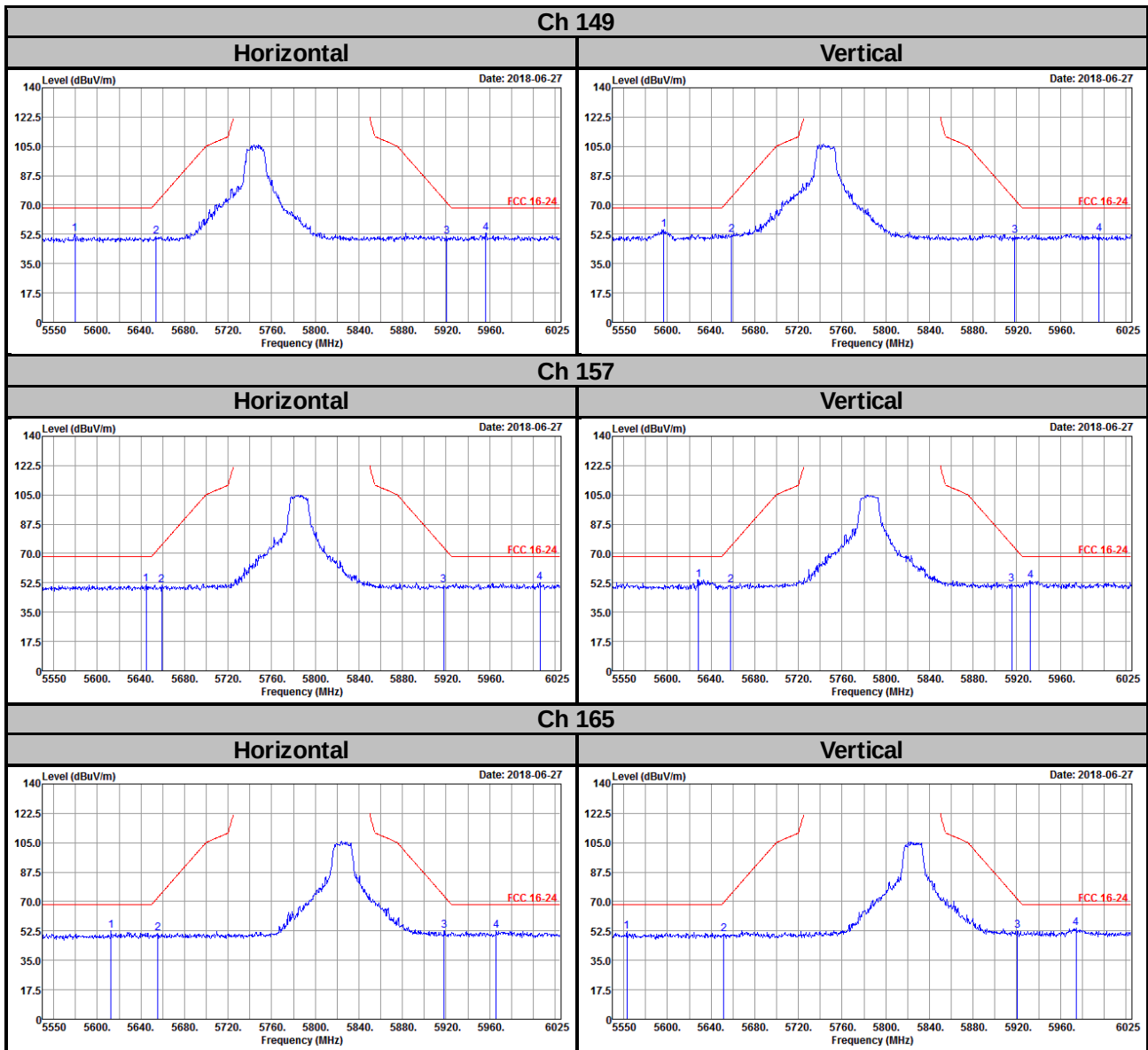
5 Pictures of Test Arrangements

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

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

Mode A

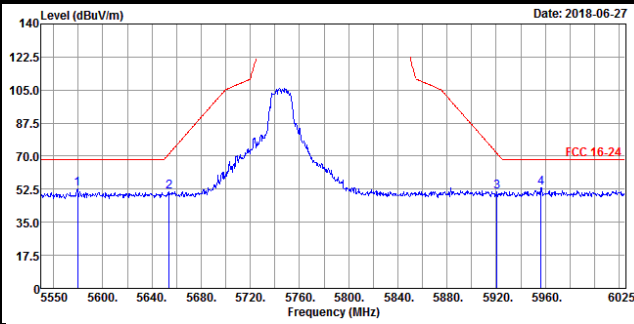
802.11a



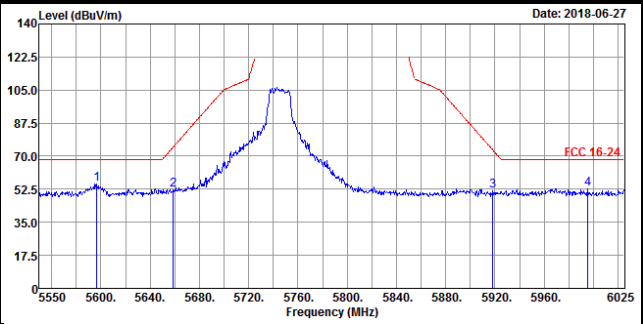
802.11n (HT20)

Ch 149

Horizontal

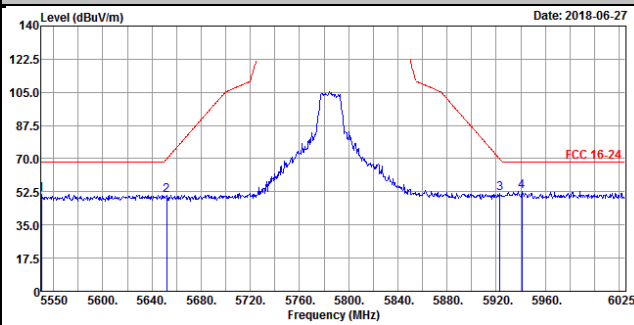


Vertical

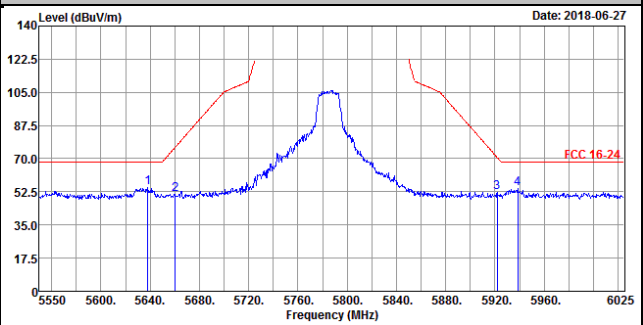


Ch 157

Horizontal

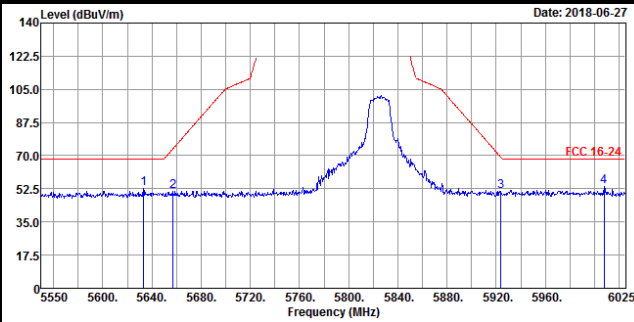


Vertical

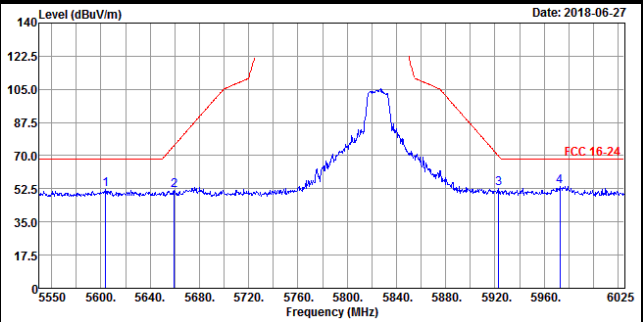


Ch 165

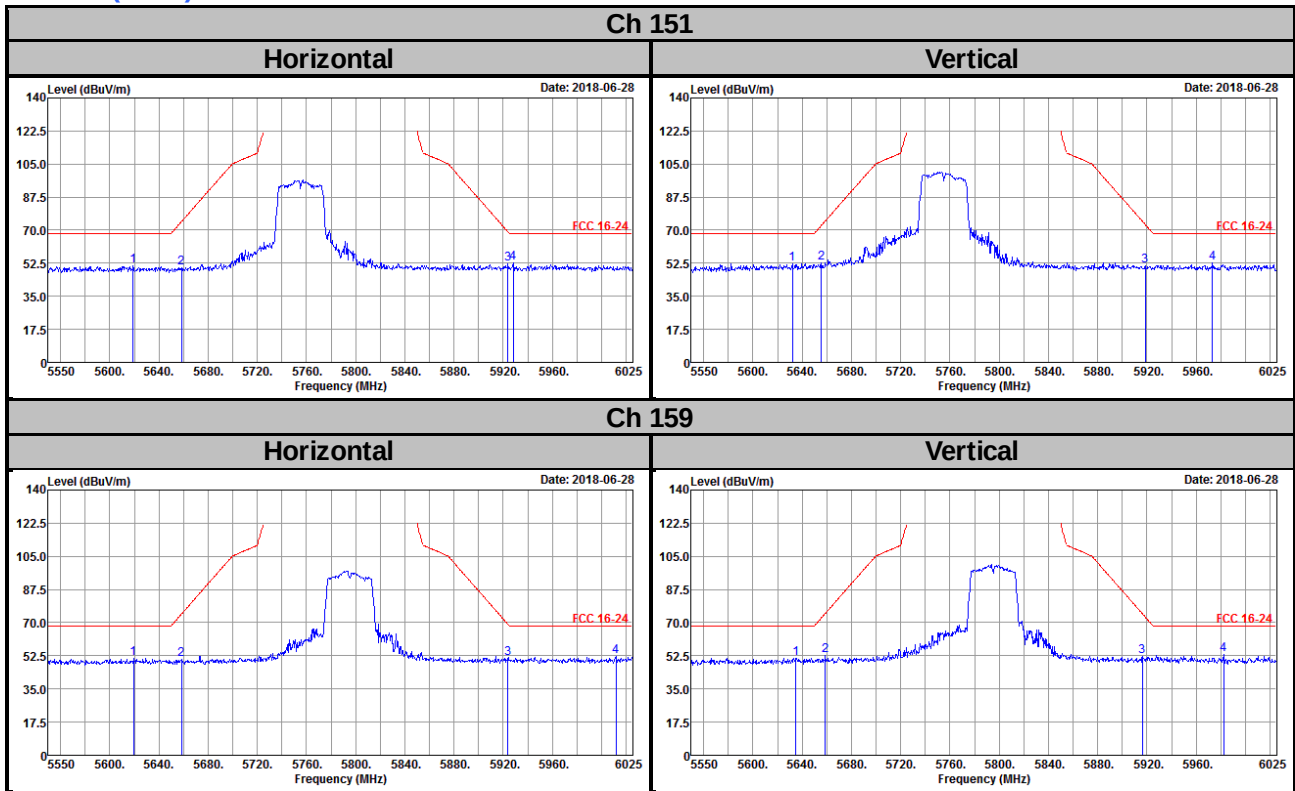
Horizontal



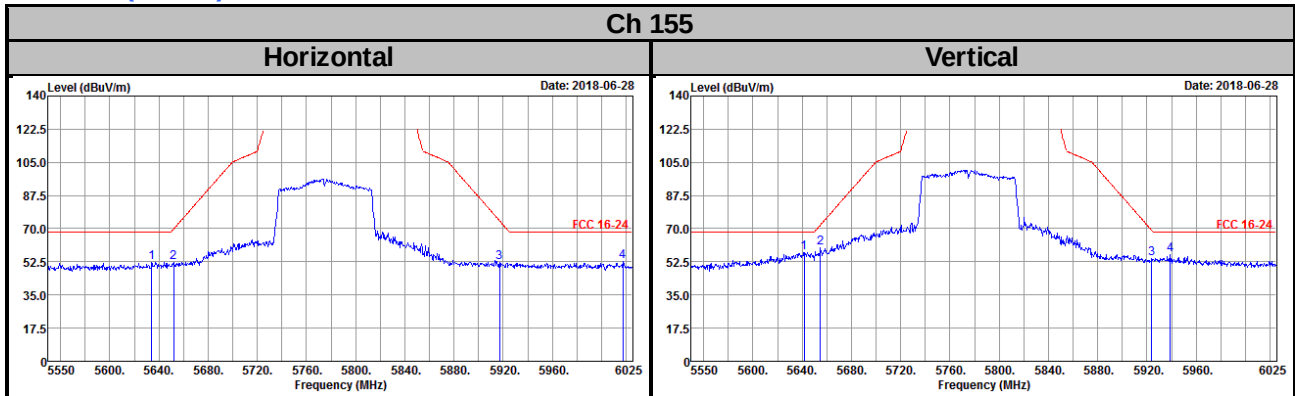
Vertical



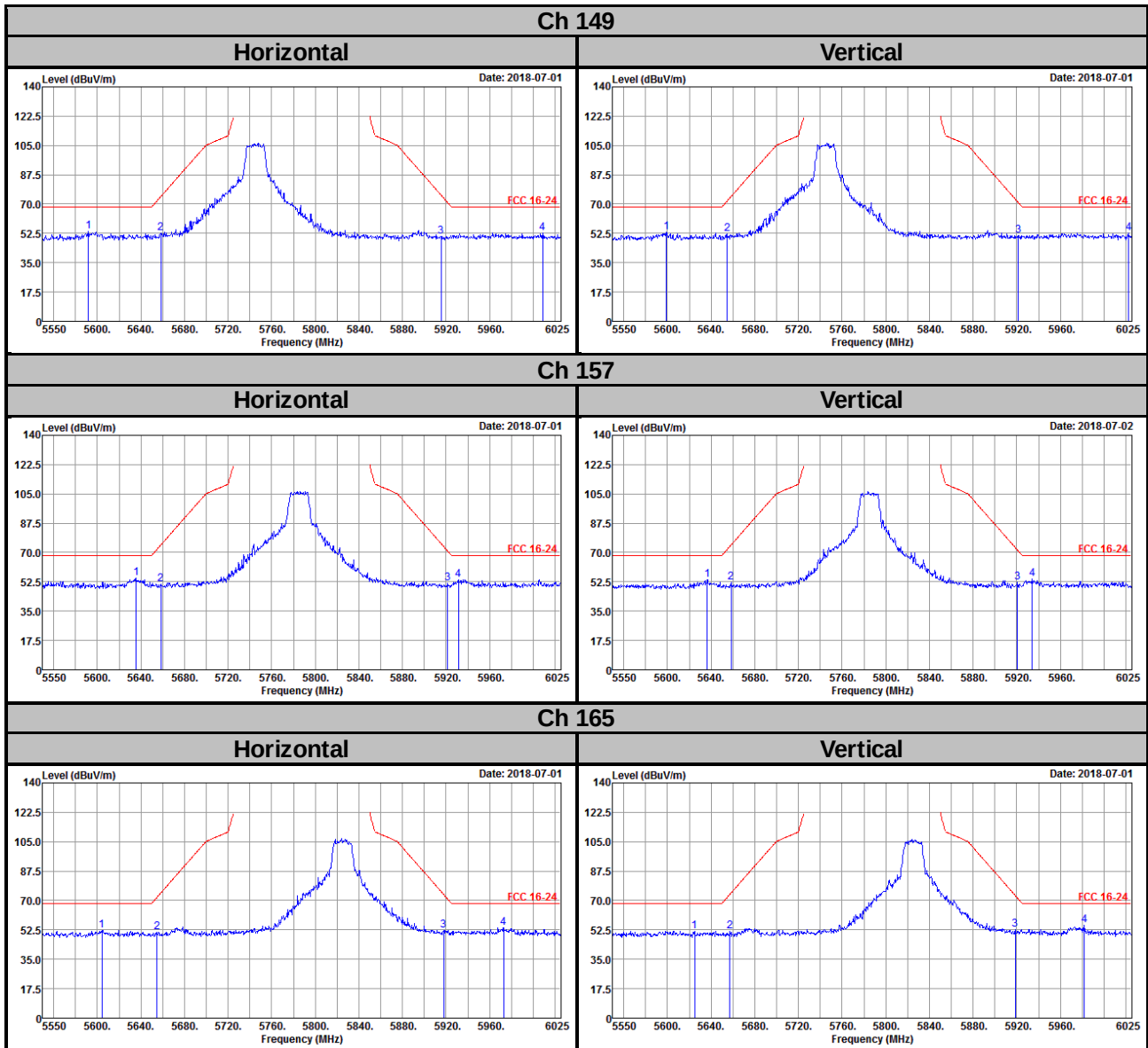
802.11n (HT40)



802.11ac (VHT80)



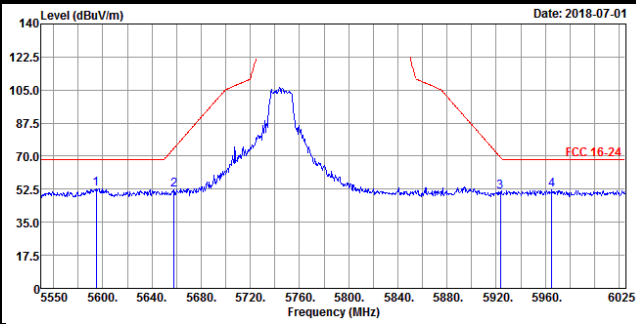
Mode B
802.11a



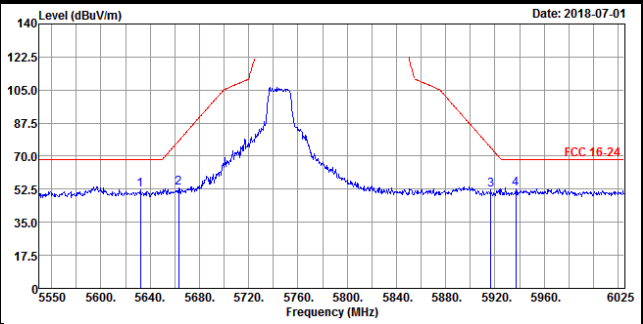
802.11n (HT20)

Ch 149

Horizontal

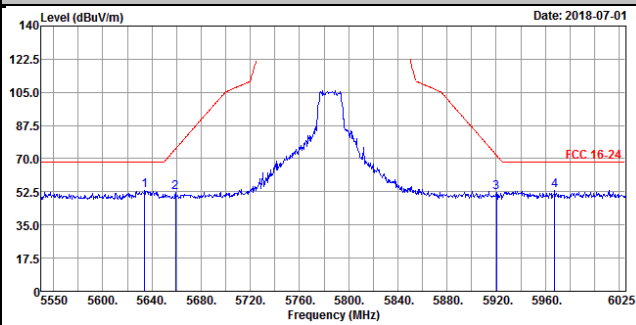


Vertical

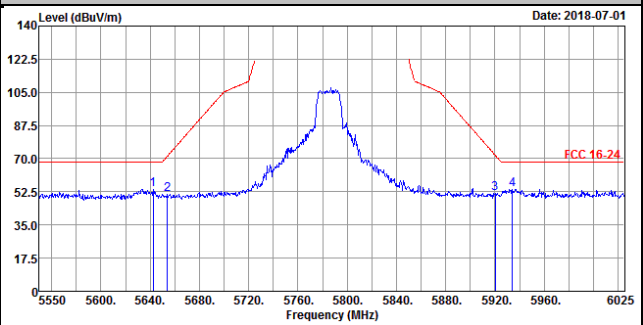


Ch 157

Horizontal

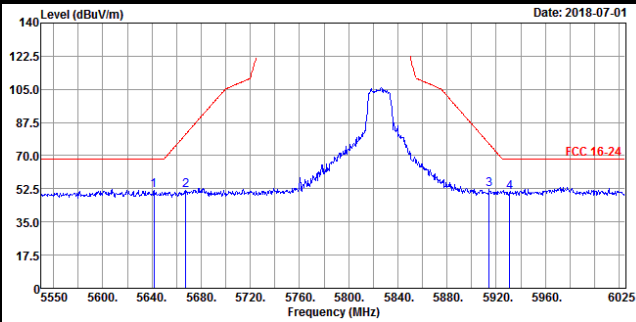


Vertical

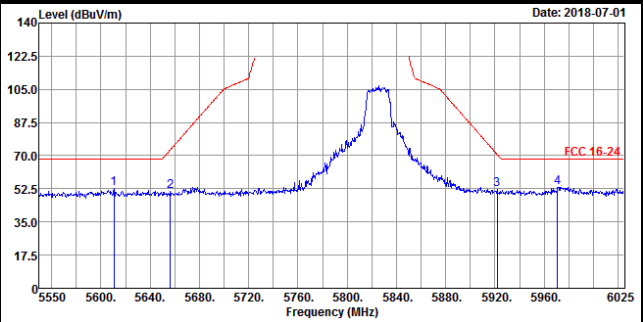


Ch 165

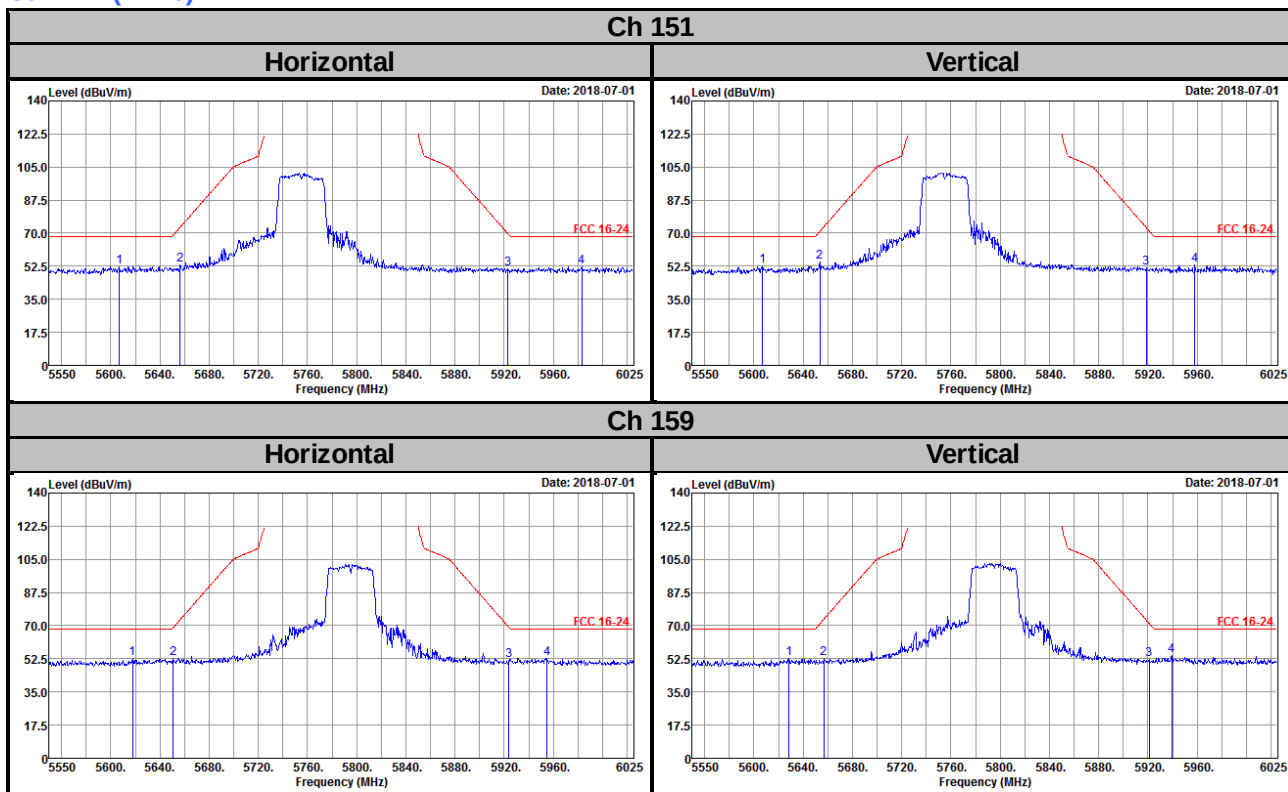
Horizontal



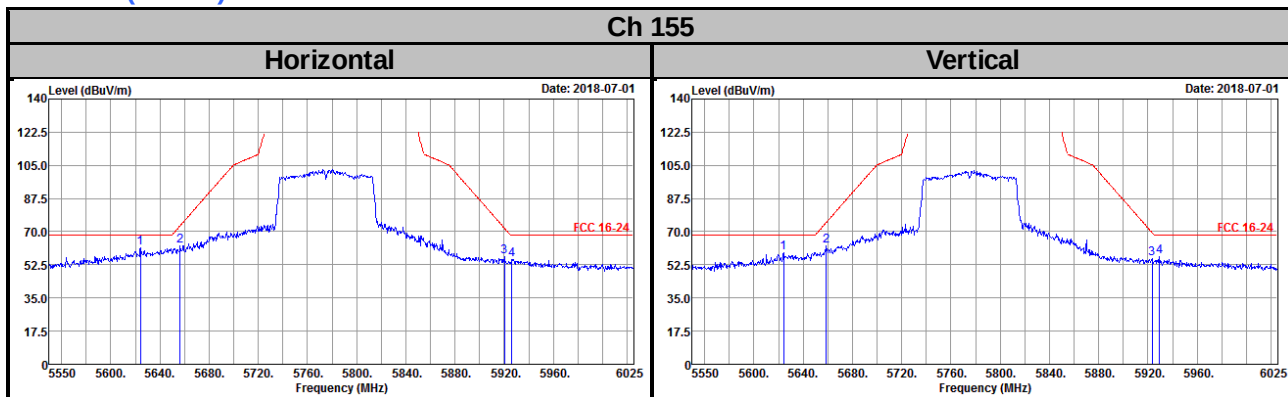
Vertical



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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Linko EMC/RF Lab

Tel: 886-2-26052180

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Hsin Chu EMC/RF/Telecom Lab

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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