



# FCC TEST REPORT (15.407)

**REPORT NO.:** RF130410C05 R1

**MODEL NO.:** WI-U2-433DM

**FCC ID:** FDI000000017

**RECEIVED:** Apr. 10, 2013

**TESTED:** May 28 ~ May 30, 2013

**ISSUED:** Aug. 23, 2013

**APPLICANT:** BUFFALO INC.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130410C05	Original release	Jul. 11, 2013
RF130410C05 R1	Revised antenna gain.	Aug. 23, 2013



# 1. CERTIFICATION

**PRODUCT:** AirStation

**MODEL:** WI-U2-433DM

**BRAND:** BUFFALO INC.

**TRADE MARK:** BUFFALO

**APPLICANT:** BUFFALO INC.

**TESTED:** May 28 ~ May 30, 2013

**TEST SAMPLE:** ENGINEERING SAMPLE

**STANDARDS:** FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10-2009

The above equipment (model: WI-U2-433DM) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY :** Maggie Wu , **DATE :** Aug. 23, 2013  
Maggie Wu / Specialist

**APPROVED BY :** Ken Liu , **DATE :** Aug. 23, 2013  
Ken Liu / Senior Manager

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is 14.23dB at 0.18898MHz.
15.407(b/1/2/3) (b)(6)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.1dB at 5350.00MHz.
15.407(a/1/2)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

### 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	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~ 1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	AirStation
<b>MODEL NO.</b>	WI-U2-433DM
<b>POWER SUPPLY</b>	5.0Vdc from host equipment
<b>MODULATION TYPE</b>	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
<b>MODULATION TECHNOLOGY</b>	OFDM
<b>TRANSFER RATE</b>	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150.0Mbps 802.11ac: up to 433.3Mbps
<b>OPERATING FREQUENCY</b>	5150 ~ 5250MHz, 5250 ~ 5350MHz & 5470 ~ 5725MHz
<b>NUMBER OF CHANNEL</b>	<b>5150 ~ 5250MHz:</b> 802.11a, 802.11n (20MHz): 4 802.11n (40MHz): 2 802.11ac (80MHz): 1 <b>5250 ~ 5350MHz:</b> 802.11a, 802.11n (20MHz): 4 802.11n (40MHz): 2 802.11ac (80MHz): 1 <b>5470 ~ 5725MHz:</b> 802.11a, 802.11n (20MHz): 8 802.11n (40MHz): 3 802.11ac (80MHz): 1
<b>OUTPUT POWER</b>	33.963mW for 5180 ~ 5240MHz 34.754mW for 5260 ~ 5320MHz 33.574mW for 5500 ~ 5700MHz
<b>ANTENNA TYPE</b>	PIFA antenna with 2.72dBi gain
<b>ANTENNA CONNECTOR</b>	NA
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	NA

**NOTE:**

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

<b>MODULATION MODE</b>	<b>TX FUNCTION</b>
<b>802.11b</b>	1TX
<b>802.11g</b>	1TX
<b>802.11a</b>	1TX
<b>802.11n (20MHz)</b>	1TX
<b>802.11n (40MHz)</b>	1TX
<b>802.11ac (80MHz)</b>	1TX

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



### 3.2 DESCRIPTION OF TEST MODES

#### FOR 5150 ~ 5250MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
42	5210MHz

#### FOR 5250 ~ 5350MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
58	5290MHz

**FOR 5470 ~ 5725MHz**

8 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

3 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz		

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
106	5530MHz

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

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

**NOTE:**  
The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

#### **RADIATED EMISSION TEST (ABOVE 1GHz):**

- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11ac (80MHz)		42	42	OFDM	BPSK	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106	106	OFDM	BPSK	29.3

#### **RADIATED EMISSION TEST (BELOW 1GHz):**

- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5320	36 to 64	64	OFDM	BPSK	6.0
-	802.11ac (80MHz)	5530	106	106	OFDM	BPSK	29.3

**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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5320	36 to 64	64	OFDM	BPSK	6.0
-	802.11ac (80MHz)	5530	106	106	OFDM	BPSK	29.3

**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.

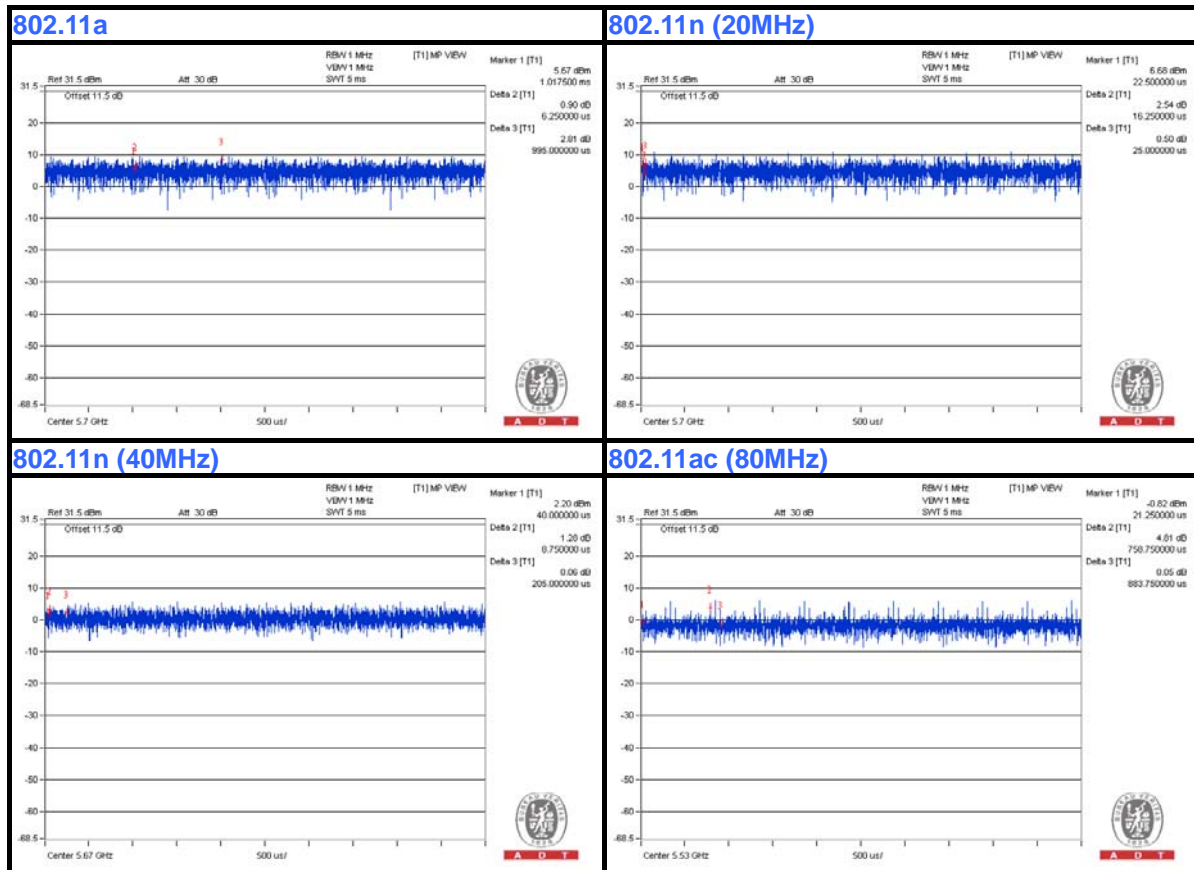
EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11ac (80MHz)		42	42	OFDM	BPSK	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106	106	OFDM	BPSK	29.3

**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Cedric Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Cedric Wu
PLC	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
APCM	25deg. C, 65%RH	120Vac, 60Hz	Nick Chen

### 3.3 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is > 98 %, duty factor is not required.



### 3.4 DESCRIPTION OF SUPPORT UNITS

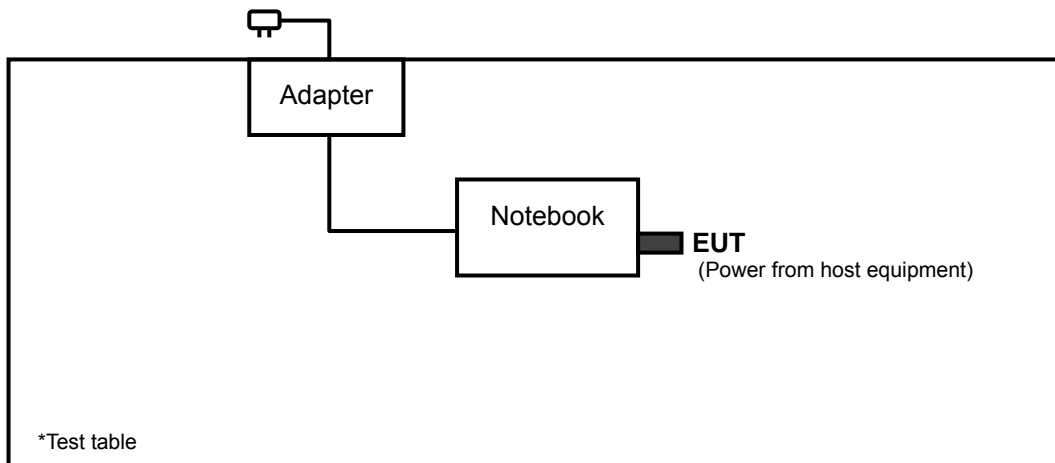
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	DELL	E5420	33MKMQ1	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

**NOTE:** 1. All power cords of the above support units are non shielded (1.8m).  
 2. Item 1 as a communication partner to transfer data.

#### 3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



### 3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

**FCC Part 15, Subpart E (15.407)**

**789033 D01 General UNII Test Procedures v01 r03**

ANSI C63.10-2009

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

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

## 4. TEST TYPES AND RESULTS

### 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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 1000MHz, 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 20dB under any condition of modulation.

#### 4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
√	FIELD STRENGTH AT 3m (dBμV/m)	
	PK	AV
	74	54
	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
	PK	PK
	-27	68.3

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

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



#### 4.1.3 TEST INSTRUMENTS

**Tested Date: May 28 ~ May30, 2013**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Aug. 21, 2012	Aug. 20, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSU 43	100115	Oct. 25, 2012	Oct. 24, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-404	Dec. 22, 2012	Dec. 21, 2013
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 11, 2012	Jul. 10, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier Agilent	8449B	3008A01961	Oct. 25, 2012	Oct. 24, 2013
Preamplifier Agilent	8447D	2944A10738	Oct. 23, 2012	Oct. 22, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309220/4	Aug. 28, 2012	Aug. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250724/4	Aug. 28, 2012	Aug. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 28, 2012	Aug. 27, 2013
Software BV ADT	ADT_Radiated_ V7.6.15.9.3	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table BV ADT	TT100.	TT93021704	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021704	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 25, 2012	Oct. 24, 2013
High Speed Peak Power Meter	ML2495A	0824012	Aug. 22, 2012	Aug. 21, 2013
Power Sensor	MA2411B	0738171	Jul. 30, 2012	Jul. 29, 2013
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 13, 2012	Jun. 12, 2013

- 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 4.  
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.  
 4. The FCC Site Registration No. is 460141.  
 5. The IC Site Registration No. is IC7450F-4.

#### 4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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 antenna is a broadband antenna, and its height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

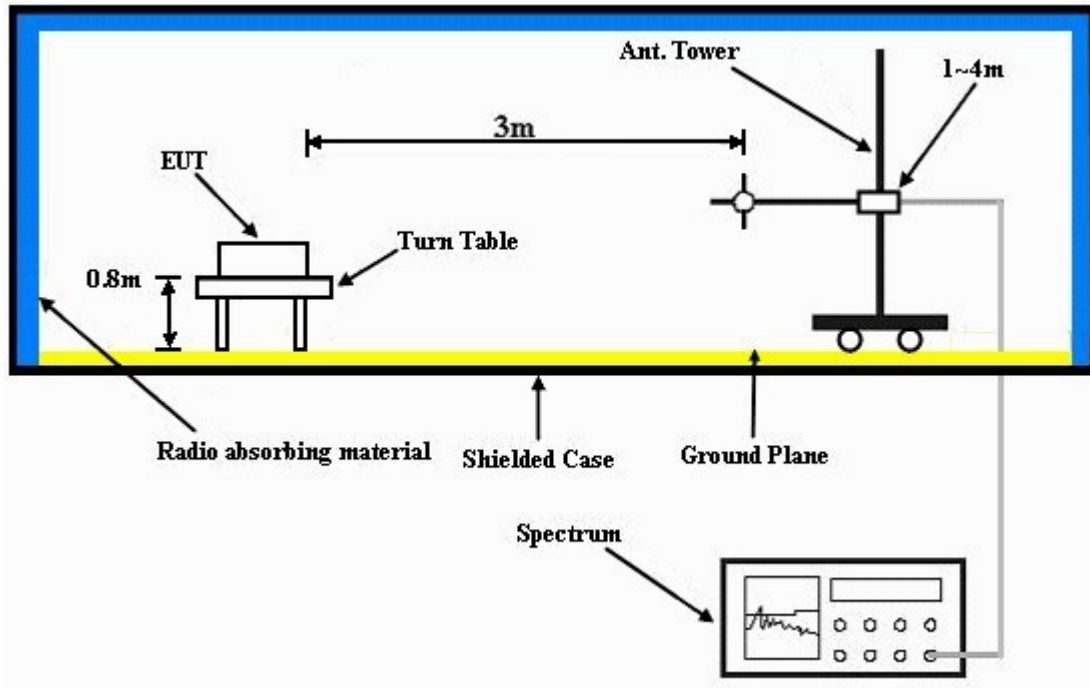
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz(Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
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



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

#### 4.1.7 EUT OPERATING CONDITION

- Prepared a notebook to act as a communication partner and placed it on the test table.
- Plugged the EUT into the notebook.
- The communication partner ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- The communication partner sent data to EUT by command "PING".

## 4.1.8 TEST RESULTS

### ABOVE 1GHz DATA :

#### 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.0 PK	74.0	-19.0	1.05 H	130	15.80	39.20
2	5150.00	42.8 AV	54.0	-11.2	1.05 H	130	3.60	39.20
3	*5180.00	101.4 PK			1.04 H	134	62.20	39.20
4	*5180.00	91.5 AV			1.04 H	134	52.30	39.20
5	#10360.00	57.1 PK	74.0	-16.9	1.00 H	300	6.30	50.80
6	#10360.00	44.5 AV	54.0	-9.5	1.00 H	300	-6.30	50.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	1.15 V	277	16.40	39.20
2	5150.00	43.3 AV	54.0	-10.7	1.15 V	277	4.10	39.20
3	*5180.00	101.8 PK			1.15 V	276	62.60	39.20
4	*5180.00	91.8 AV			1.15 V	276	52.60	39.20
5	#10360.00	57.9 PK	74.0	-16.1	1.00 V	230	7.10	50.80
6	#10360.00	45.2 AV	54.0	-8.8	1.00 V	230	-5.60	50.80

#### REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.1 PK			1.05 H	138	61.90	39.20
2	*5200.00	91.1 AV			1.05 H	138	51.90	39.20
3	#10400.00	57.0 PK	74.0	-17.0	1.00 H	305	6.20	50.80
4	#10400.00	44.3 AV	54.0	-9.7	1.00 H	305	-6.50	50.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.4 PK			1.29 V	276	62.20	39.20
2	*5200.00	91.5 AV			1.29 V	276	52.30	39.20
3	#10400.00	57.8 PK	74.0	-16.2	1.00 V	233	7.00	50.80
4	#10400.00	45.0 AV	54.0	-9.0	1.00 V	233	-5.80	50.80

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.9 PK			1.00 H	127	62.60	39.30
2	*5240.00	92.1 AV			1.00 H	127	52.80	39.30
3	5350.00	56.0 PK	74.0	-18.0	1.00 H	125	16.60	39.40
4	5350.00	43.1 AV	54.0	-10.9	1.00 H	125	3.70	39.40
5	#10480.00	57.5 PK	74.0	-16.5	1.00 H	294	6.40	51.10
6	#10480.00	44.8 AV	54.0	-9.2	1.00 H	294	-6.30	51.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.6 PK			1.14 V	276	63.30	39.30
2	*5240.00	92.9 AV			1.14 V	276	53.60	39.30
3	5350.00	56.5 PK	74.0	-17.5	1.15 V	277	17.10	39.40
4	5350.00	43.5 AV	54.0	-10.5	1.15 V	277	4.10	39.40
5	#10480.00	58.4 PK	74.0	-15.6	1.00 V	221	7.30	51.10
6	#10480.00	45.6 AV	54.0	-8.4	1.00 V	221	-5.50	51.10

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.10 H	136	15.70	39.20
2	5150.00	42.6 AV	54.0	-11.4	1.10 H	136	3.40	39.20
3	*5260.00	101.6 PK			1.12 H	135	62.30	39.30
4	*5260.00	92.3 AV			1.12 H	135	53.00	39.30
5	#10520.00	57.8 PK	74.0	-16.2	1.00 H	310	6.60	51.20
6	#10520.00	44.9 AV	54.0	-9.1	1.00 H	310	-6.30	51.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	1.13 V	277	15.90	39.20
2	5150.00	42.9 AV	54.0	-11.1	1.13 V	277	3.70	39.20
3	*5260.00	101.9 PK			1.13 V	273	62.60	39.30
4	*5260.00	92.7 AV			1.13 V	273	53.40	39.30
5	#10520.00	58.1 PK	74.0	-15.9	1.00 V	250	6.90	51.20
6	#10520.00	45.2 AV	54.0	-8.8	1.00 V	250	-6.00	51.20

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.1 PK			1.10 H	139	63.70	39.40
2	*5300.00	93.9 AV			1.10 H	139	54.50	39.40
3	10600.00	58.4 PK	74.0	-15.6	1.00 H	317	6.90	51.50
4	10600.00	45.6 AV	54.0	-8.4	1.00 H	317	-5.90	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.6 PK			1.13 V	278	64.20	39.40
2	*5300.00	94.1 AV			1.13 V	278	54.70	39.40
3	10600.00	58.8 PK	74.0	-15.2	1.00 V	255	7.30	51.50
4	10600.00	46.0 AV	54.0	-8.0	1.00 V	255	-5.50	51.50

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.





EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	102.6 PK			1.12 H	132	63.20	39.40
2	*5320.00	93.0 AV			1.12 H	132	53.60	39.40
3	5350.00	55.3 PK	74.0	-18.7	1.12 H	134	15.90	39.40
4	5350.00	43.1 AV	54.0	-10.9	1.12 H	134	3.70	39.40
5	10640.00	58.2 PK	74.0	-15.8	1.00 H	302	6.70	51.50
6	10640.00	45.1 AV	54.0	-8.9	1.00 H	302	-6.40	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.0 PK			1.12 V	277	63.60	39.40
2	*5320.00	93.4 AV			1.12 V	277	54.00	39.40
3	5350.00	55.6 PK	74.0	-18.4	1.13 V	278	16.20	39.40
4	5350.00	43.3 AV	54.0	-10.7	1.13 V	278	3.90	39.40
5	10640.00	58.5 PK	74.0	-15.5	1.00 V	248	7.00	51.50
6	10640.00	45.6 AV	54.0	-8.4	1.00 V	248	-5.90	51.50

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	55.7 PK	74.0	-18.3	1.30 H	148	16.10	39.60
2	5460.00	42.9 AV	54.0	-11.1	1.30 H	148	3.30	39.60
3	#5470.00	56.3 PK	74.0	-17.7	1.33 H	150	16.70	39.60
4	#5470.00	43.0 AV	54.0	-11.0	1.33 H	150	3.40	39.60
5	*5500.00	103.8 PK			1.33 H	148	64.10	39.70
6	*5500.00	93.8 AV			1.33 H	148	54.10	39.70
7	11000.00	60.0 PK	74.0	-14.0	1.00 H	318	6.80	53.20
8	11000.00	46.3 AV	54.0	-7.7	1.00 H	318	-6.90	53.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.4 PK	74.0	-17.6	1.09 V	278	16.80	39.60
2	5460.00	43.0 AV	54.0	-11.0	1.09 V	278	3.40	39.60
3	#5470.00	56.7 PK	74.0	-17.3	1.10 V	280	17.10	39.60
4	#5470.00	43.4 AV	54.0	-10.6	1.10 V	280	3.80	39.60
5	*5500.00	104.4 PK			1.08 V	279	64.70	39.70
6	*5500.00	93.9 AV			1.08 V	279	54.20	39.70
7	11000.00	60.3 PK	74.0	-13.7	1.00 V	266	7.10	53.20
8	11000.00	46.7 AV	54.0	-7.3	1.00 V	266	-6.50	53.20

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	103.3 PK			1.35 H	150	63.50	39.80
2	*5580.00	93.4 AV			1.35 H	150	53.60	39.80
3	11160.00	59.5 PK	74.0	-14.5	1.00 H	320	6.60	52.90
4	11160.00	46.0 AV	54.0	-8.0	1.00 H	320	-6.90	52.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	103.8 PK			1.07 V	280	64.00	39.80
2	*5580.00	93.6 AV			1.07 V	280	53.80	39.80
3	11160.00	59.9 PK	74.0	-14.1	1.00 V	270	7.00	52.90
4	11160.00	46.4 AV	54.0	-7.6	1.00 V	270	-6.50	52.90

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	98.5 PK			1.30 H	146	58.40	40.10
2	*5700.00	89.1 AV			1.30 H	146	49.00	40.10
3	#5725.00	54.0 PK	74.0	-20.0	1.31 H	145	13.90	40.10
4	#5725.00	42.1 AV	54.0	-11.9	1.31 H	145	2.00	40.10
5	11400.00	57.6 PK	74.0	-16.4	1.00 H	311	4.80	52.80
6	11400.00	44.0 AV	54.0	-10.0	1.00 H	311	-8.80	52.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	99.0 PK			1.14 V	270	58.90	40.10
2	*5700.00	89.5 AV			1.14 V	270	49.40	40.10
3	#5725.00	54.4 PK	74.0	-19.6	1.14 V	273	14.30	40.10
4	#5725.00	42.6 AV	54.0	-11.4	1.14 V	273	2.50	40.10
5	11400.00	58.2 PK	74.0	-15.8	1.00 V	261	5.40	52.80
6	11400.00	44.7 AV	54.0	-9.3	1.00 V	261	-8.10	52.80

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.02 H	137	17.00	39.20
2	5150.00	43.0 AV	54.0	-11.0	1.02 H	137	3.80	39.20
3	*5180.00	101.9 PK			1.03 H	135	62.70	39.20
4	*5180.00	92.3 AV			1.03 H	135	53.10	39.20
5	#10360.00	59.5 PK	74.0	-14.5	1.00 H	320	8.70	50.80
6	#10360.00	44.9 AV	54.0	-9.1	1.00 H	320	-5.90	50.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.9 PK	74.0	-17.1	1.15 V	277	17.70	39.20
2	5150.00	43.6 AV	54.0	-10.4	1.15 V	277	4.40	39.20
3	*5180.00	102.5 PK			1.15 V	276	63.30	39.20
4	*5180.00	92.7 AV			1.15 V	276	53.50	39.20
5	#10360.00	60.2 PK	74.0	-13.8	1.00 V	210	9.40	50.80
6	#10360.00	45.5 AV	54.0	-8.5	1.00 V	210	-5.30	50.80

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.6 PK			1.05 H	140	62.40	39.20
2	*5200.00	91.9 AV			1.05 H	140	52.70	39.20
3	#10400.00	59.3 PK	74.0	-14.7	1.00 H	323	8.50	50.80
4	#10400.00	44.6 AV	54.0	-9.4	1.00 H	323	-6.20	50.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.0 PK			1.29 V	278	62.80	39.20
2	*5200.00	92.2 AV			1.29 V	278	53.00	39.20
3	#10400.00	59.9 PK	74.0	-14.1	1.00 V	214	9.10	50.80
4	#10400.00	45.1 AV	54.0	-8.9	1.00 V	214	-5.70	50.80

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.2 PK			1.01 H	131	62.90	39.30
2	*5240.00	92.5 AV			1.01 H	131	53.20	39.30
3	5350.00	57.6 PK	74.0	-16.4	1.01 H	131	18.20	39.40
4	5350.00	43.4 AV	54.0	-10.6	1.01 H	131	4.00	39.40
5	#10480.00	59.7 PK	74.0	-14.3	1.00 H	308	8.60	51.10
6	#10480.00	45.4 AV	54.0	-8.6	1.00 H	308	-5.70	51.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.7 PK			1.13 V	276	63.40	39.30
2	*5240.00	93.0 AV			1.13 V	276	53.70	39.30
3	5350.00	57.1 PK	74.0	-16.9	1.15 V	277	17.70	39.40
4	5350.00	43.9 AV	54.0	-10.1	1.15 V	277	4.50	39.40
5	#10480.00	60.5 PK	74.0	-13.5	1.00 V	207	9.40	51.10
6	#10480.00	45.7 AV	54.0	-8.3	1.00 V	207	-5.40	51.10

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	44.5 PK	74.0	-29.5	1.50 H	140	5.30	39.20
2	5150.00	42.5 AV	54.0	-11.5	1.50 H	140	3.30	39.20
3	*5260.00	103.0 PK			1.48 H	139	63.70	39.30
4	*5260.00	93.5 AV			1.48 H	139	54.20	39.30
5	#10520.00	60.7 PK	74.0	-13.3	1.00 H	301	9.50	51.20
6	#10520.00	45.6 AV	54.0	-8.4	1.00 H	301	-5.60	51.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	44.7 PK	74.0	-29.3	1.13 V	275	5.50	39.20
2	5150.00	42.6 AV	54.0	-11.4	1.13 V	275	3.40	39.20
3	*5260.00	103.3 PK			1.13 V	276	64.00	39.30
4	*5260.00	93.5 AV			1.13 V	276	54.20	39.30
5	#10520.00	60.9 PK	74.0	-13.1	1.00 V	205	9.70	51.20
6	#10520.00	46.0 AV	54.0	-8.0	1.00 V	205	-5.20	51.20

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.





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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.3 PK			1.44 H	137	63.90	39.40
2	*5300.00	93.7 AV			1.44 H	137	54.30	39.40
3	10600.00	60.9 PK	74.0	-13.1	1.00 H	304	9.40	51.50
4	10600.00	45.9 AV	54.0	-8.1	1.00 H	304	-5.60	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.7 PK			1.13 V	278	64.30	39.40
2	*5300.00	94.6 AV			1.13 V	278	55.20	39.40
3	10600.00	61.2 PK	74.0	-12.8	1.00 V	208	9.70	51.50
4	10600.00	46.4 AV	54.0	-7.6	1.00 V	208	-5.10	51.50

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.6 PK			1.42 H	134	64.20	39.40
2	*5320.00	93.9 AV			1.42 H	134	54.50	39.40
3	5350.00	44.9 PK	74.0	-29.1	1.40 H	133	5.50	39.40
4	5350.00	42.8 AV	54.0	-11.2	1.40 H	133	3.40	39.40
5	10640.00	61.2 PK	74.0	-12.8	1.00 H	299	9.70	51.50
6	10640.00	46.4 AV	54.0	-7.6	1.00 H	299	-5.10	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	104.1 PK			1.12 V	278	64.70	39.40
2	*5320.00	94.2 AV			1.12 V	278	54.80	39.40
3	5350.00	45.3 PK	74.0	-28.7	1.10 V	279	5.90	39.40
4	5350.00	43.1 AV	54.0	-10.9	1.10 V	279	3.70	39.40
5	10640.00	61.6 PK	74.0	-12.4	1.00 V	200	10.10	51.50
6	10640.00	46.9 AV	54.0	-7.1	1.00 V	200	-4.60	51.50

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.6 PK	74.0	-17.4	1.30 H	141	17.00	39.60
2	5460.00	43.0 AV	54.0	-11.0	1.30 H	141	3.40	39.60
3	#5470.00	56.2 PK	74.0	-17.8	1.31 H	141	16.60	39.60
4	#5470.00	43.4 AV	54.0	-10.6	1.31 H	141	3.80	39.60
5	*5500.00	103.8 PK			1.34 H	144	64.10	39.70
6	*5500.00	94.4 AV			1.34 H	144	54.70	39.70
7	11000.00	58.9 PK	74.0	-15.1	1.00 H	290	5.70	53.20
8	11000.00	46.2 AV	54.0	-7.8	1.00 H	290	-7.00	53.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.8 PK	74.0	-17.2	1.08 V	280	17.20	39.60
2	5460.00	43.2 AV	54.0	-10.8	1.08 V	280	3.60	39.60
3	#5470.00	56.4 PK	74.0	-17.6	1.11 V	281	16.80	39.60
4	#5470.00	43.6 AV	54.0	-10.4	1.11 V	281	4.00	39.60
5	*5500.00	104.0 PK			1.10 V	280	64.30	39.70
6	*5500.00	94.2 AV			1.10 V	280	54.50	39.70
7	11000.00	59.1 PK	74.0	-14.9	1.00 V	195	5.90	53.20
8	11000.00	46.5 AV	54.0	-7.5	1.00 V	195	-6.70	53.20

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	102.7 PK			1.30 H	140	62.90	39.80
2	*5580.00	93.2 AV			1.30 H	140	53.40	39.80
3	11160.00	58.5 PK	74.0	-15.5	1.00 H	293	5.60	52.90
4	11160.00	45.9 AV	54.0	-8.1	1.00 H	293	-7.00	52.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	103.0 PK			1.20 V	281	63.20	39.80
2	*5580.00	93.7 AV			1.20 V	281	53.90	39.80
3	11160.00	58.6 PK	74.0	-15.4	1.00 V	196	5.70	52.90
4	11160.00	46.1 AV	54.0	-7.9	1.00 V	196	-6.80	52.90

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.5 PK			1.30 H	147	63.40	40.10
2	*5700.00	94.2 AV			1.30 H	147	54.10	40.10
3	#5725.00	54.3 PK	74.0	-19.7	1.30 H	149	14.20	40.10
4	#5725.00	42.8 AV	54.0	-11.2	1.30 H	149	2.70	40.10
5	11400.00	58.7 PK	74.0	-15.3	1.00 H	288	5.90	52.80
6	11400.00	45.9 AV	54.0	-8.1	1.00 H	288	-6.90	52.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.8 PK			1.14 V	271	63.70	40.10
2	*5700.00	93.9 AV			1.14 V	271	53.80	40.10
3	#5725.00	54.6 PK	74.0	-19.4	1.15 V	272	14.50	40.10
4	#5725.00	43.0 AV	54.0	-11.0	1.15 V	272	2.90	40.10
5	11400.00	58.9 PK	74.0	-15.1	1.00 V	192	6.10	52.80
6	11400.00	46.4 AV	54.0	-7.6	1.00 V	192	-6.40	52.80

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.0 PK	74.0	-18.0	1.10 H	140	16.80	39.20
2	5150.00	43.9 AV	54.0	-10.1	1.10 H	140	4.70	39.20
3	*5190.00	98.5 PK			1.13 H	138	59.30	39.20
4	*5190.00	88.5 AV			1.13 H	138	49.30	39.20
5	#10380.00	57.8 PK	74.0	-16.2	1.00 H	270	7.00	50.80
6	#10380.00	44.5 AV	54.0	-9.5	1.00 H	270	-6.30	50.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.2 PK	74.0	-17.8	1.12 V	275	17.00	39.20
2	5150.00	44.0 AV	54.0	-10.0	1.12 V	275	4.80	39.20
3	*5190.00	98.7 PK			1.14 V	274	59.50	39.20
4	*5190.00	89.1 AV			1.14 V	274	49.90	39.20
5	#10380.00	58.1 PK	74.0	-15.9	1.00 V	180	7.30	50.80
6	#10380.00	44.9 AV	54.0	-9.1	1.00 V	180	-5.90	50.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	99.4 PK			1.16 H	144	60.10	39.30
2	*5230.00	89.3 AV			1.16 H	144	50.00	39.30
3	5350.00	56.3 PK	74.0	-17.7	1.15 H	142	16.90	39.40
4	5350.00	44.1 AV	54.0	-9.9	1.15 H	142	4.70	39.40
5	#10460.00	58.1 PK	74.0	-15.9	1.00 H	274	7.10	51.00
6	#10460.00	44.7 AV	54.0	-9.3	1.00 H	274	-6.30	51.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	99.7 PK			1.13 V	278	60.40	39.30
2	*5230.00	90.2 AV			1.13 V	278	50.90	39.30
3	5350.00	56.6 PK	74.0	-17.4	1.10 V	281	17.20	39.40
4	5350.00	44.3 AV	54.0	-9.7	1.10 V	281	4.90	39.40
5	#10460.00	58.5 PK	74.0	-15.5	1.00 V	183	7.50	51.00
6	#10460.00	45.3 AV	54.0	-8.7	1.00 V	183	-5.70	51.00

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	1.10 H	140	17.30	39.20
2	5150.00	44.3 AV	54.0	-9.7	1.10 H	140	5.10	39.20
3	*5270.00	100.0 PK			1.11 H	141	60.70	39.30
4	*5270.00	90.0 AV			1.11 H	141	50.70	39.30
5	#10540.00	58.3 PK	74.0	-15.7	1.00 H	261	7.00	51.30
6	#10540.00	45.0 AV	54.0	-9.0	1.00 H	261	-6.30	51.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.7 PK	74.0	-17.3	1.00 V	280	17.50	39.20
2	5150.00	44.6 AV	54.0	-9.4	1.00 V	280	5.40	39.20
3	*5270.00	100.4 PK			1.00 V	276	61.10	39.30
4	*5270.00	90.4 AV			1.00 V	276	51.10	39.30
5	#10540.00	58.8 PK	74.0	-15.2	1.00 V	174	7.50	51.30
6	#10540.00	45.7 AV	54.0	-8.3	1.00 V	174	-5.60	51.30

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.





A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	100.2 PK			1.00 H	139	60.80	39.40
2	*5310.00	90.1 AV			1.00 H	139	50.70	39.40
3	5350.00	62.0 PK	74.0	-12.0	1.00 H	139	22.60	39.40
4	5350.00	47.8 AV	54.0	-6.2	1.00 H	139	8.40	39.40
5	10620.00	58.2 PK	74.0	-15.8	1.00 H	255	6.70	51.50
6	10620.00	45.4 AV	54.0	-8.6	1.00 H	255	-6.10	51.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	100.7 PK			1.13 V	278	61.30	39.40
2	*5310.00	90.4 AV			1.13 V	278	51.00	39.40
3	5350.00	61.7 PK	74.0	-12.3	1.13 V	276	22.30	39.40
4	5350.00	48.0 AV	54.0	-6.0	1.13 V	276	8.60	39.40
5	10620.00	58.7 PK	74.0	-15.3	1.00 V	165	7.20	51.50
6	10620.00	45.8 AV	54.0	-8.2	1.00 V	165	-5.70	51.50

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.32 H	145	17.70	39.60
2	5460.00	43.3 AV	54.0	-10.7	1.32 H	145	3.70	39.60
3	#5470.00	57.5 PK	74.0	-16.5	1.33 H	148	17.90	39.60
4	#5470.00	44.4 AV	54.0	-9.6	1.33 H	148	4.80	39.60
5	*5510.00	100.7 PK			1.34 H	146	61.00	39.70
6	*5510.00	90.4 AV			1.34 H	146	50.70	39.70
7	11020.00	58.5 PK	74.0	-15.5	1.00 H	257	5.30	53.20
8	11020.00	45.8 AV	54.0	-8.2	1.00 H	257	-7.40	53.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.4 PK	74.0	-16.6	1.09 V	278	17.80	39.60
2	5460.00	43.5 AV	54.0	-10.5	1.09 V	278	3.90	39.60
3	#5470.00	57.7 PK	74.0	-16.3	1.09 V	281	18.10	39.60
4	#5470.00	44.7 AV	54.0	-9.3	1.09 V	281	5.10	39.60
5	*5510.00	100.9 PK			1.08 V	280	61.20	39.70
6	*5510.00	90.5 AV			1.08 V	280	50.80	39.70
7	11020.00	59.0 PK	74.0	-15.0	1.00 V	157	5.80	53.20
8	11020.00	46.2 AV	54.0	-7.8	1.00 V	157	-7.00	53.20

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	99.9 PK			1.25 H	138	60.10	39.80
2	*5550.00	89.7 AV			1.25 H	138	49.90	39.80
3	11100.00	58.1 PK	74.0	-15.9	1.00 H	250	5.20	52.90
4	11100.00	45.3 AV	54.0	-8.7	1.00 H	250	-7.60	52.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	100.1 PK			1.08 V	279	60.30	39.80
2	*5550.00	89.6 AV			1.08 V	279	49.80	39.80
3	11100.00	58.7 PK	74.0	-15.3	1.00 V	159	5.80	52.90
4	11100.00	46.0 AV	54.0	-8.0	1.00 V	159	-6.90	52.90

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	97.7 PK			1.21 H	130	57.70	40.00
2	*5670.00	87.0 AV			1.21 H	130	47.00	40.00
3	#5725.00	54.6 PK	74.0	-19.4	1.21 H	137	14.50	40.10
4	#5725.00	43.8 AV	54.0	-10.2	1.21 H	137	3.70	40.10
5	11340.00	58.0 PK	74.0	-16.0	1.00 H	247	5.10	52.90
6	11340.00	45.1 AV	54.0	-8.9	1.00 H	247	-7.80	52.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	98.1 PK			1.03 V	271	58.10	40.00
2	*5670.00	87.6 AV			1.03 V	271	47.60	40.00
3	#5725.00	55.1 PK	74.0	-18.9	1.04 V	273	15.00	40.10
4	#5725.00	43.2 AV	54.0	-10.8	1.04 V	273	3.10	40.10
5	11340.00	58.2 PK	74.0	-15.8	1.00 V	154	5.30	52.90
6	11340.00	45.5 AV	54.0	-8.5	1.00 V	154	-7.40	52.90

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.2 PK	74.0	-11.8	1.40 H	137	23.00	39.20
2	5150.00	46.9 AV	54.0	-7.1	1.40 H	137	7.70	39.20
3	*5210.00	100.3 PK			1.41 H	136	61.00	39.30
4	*5210.00	85.7 AV			1.41 H	136	46.40	39.30
5	#10420.00	57.1 PK	74.0	-16.9	1.00 H	340	6.20	50.90
6	#10420.00	44.0 AV	54.0	-10.0	1.00 H	340	-6.90	50.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.6 PK	74.0	-11.4	1.13 V	278	23.40	39.20
2	5150.00	47.4 AV	54.0	-6.6	1.13 V	278	8.20	39.20
3	*5210.00	100.5 PK			1.15 V	276	61.20	39.30
4	*5210.00	85.9 AV			1.15 V	276	46.60	39.30
5	#10420.00	57.6 PK	74.0	-16.4	1.00 V	150	6.70	50.90
6	#10420.00	44.6 AV	54.0	-9.4	1.00 V	150	-6.30	50.90

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	99.0 PK			1.00 H	140	59.60	39.40
2	*5290.00	85.3 AV			1.00 H	140	45.90	39.40
3	5350.00	67.0 PK	74.0	-7.0	1.00 H	142	27.60	39.40
4	5350.00	51.9 AV	54.0	-2.1	1.00 H	142	12.50	39.40
5	#10580.00	55.9 PK	74.0	-18.1	1.00 H	351	4.50	51.40
6	#10580.00	42.9 AV	54.0	-11.1	1.00 H	351	-8.50	51.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	99.5 PK			1.12 V	277	60.10	39.40
2	*5290.00	85.2 AV			1.12 V	277	45.80	39.40
3	5350.00	67.8 PK	74.0	-6.2	1.11 V	279	28.40	39.40
4	<b>5350.00</b>	<b>52.9 AV</b>	<b>54.0</b>	<b>-1.1</b>	<b>1.11 V</b>	<b>279</b>	<b>13.50</b>	<b>39.40</b>
5	#10580.00	56.3 PK	74.0	-17.7	1.00 V	155	4.90	51.40
6	#10580.00	43.4 AV	54.0	-10.6	1.00 V	155	-8.00	51.40

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.9 PK	74.0	-8.1	1.32 H	157	26.30	39.60
2	5460.00	49.9 AV	54.0	-4.1	1.32 H	157	10.30	39.60
3	#5470.00	67.9 PK	74.0	-6.1	1.30 H	142	28.30	39.60
4	#5470.00	50.7 AV	54.0	-3.3	1.30 H	142	11.10	39.60
5	*5530.00	100.2 PK			1.34 H	142	60.50	39.70
6	*5530.00	86.2 AV			1.34 H	142	46.50	39.70
7	11060.00	56.7 PK	74.0	-17.3	1.00 H	357	3.70	53.00
8	11060.00	43.6 AV	54.0	-10.4	1.00 H	357	-9.40	53.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	66.3 PK	74.0	-7.7	1.10 V	278	26.70	39.60
2	5460.00	50.5 AV	54.0	-3.5	1.10 V	278	10.90	39.60
3	#5470.00	69.7 PK	74.0	-4.3	1.09 V	276	30.10	39.60
4	#5470.00	52.1 AV	54.0	-1.9	1.09 V	276	12.50	39.60
5	*5530.00	100.5 PK			1.09 V	280	60.80	39.70
6	*5530.00	86.6 AV			1.09 V	280	46.90	39.70
7	11060.00	57.1 PK	74.0	-16.9	1.00 V	160	4.10	53.00
8	11060.00	44.1 AV	54.0	-9.9	1.00 V	160	-8.90	53.00

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " \* ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

**BELOW 1GHz WORST-CASE DATA : 802.11a**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	113.34	30.3 QP	43.5	-13.2	1.00 H	250	19.10	11.20
2	167.67	32.8 QP	43.5	-10.7	1.24 H	286	19.50	13.30
3	239.46	33.0 QP	46.0	-13.0	1.50 H	121	20.80	12.20
4	305.44	27.6 QP	46.0	-18.4	1.75 H	303	13.10	14.50
5	532.46	24.3 QP	46.0	-21.7	1.24 H	279	4.30	20.00
6	732.32	27.1 QP	46.0	-18.9	1.24 H	55	3.50	23.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.78	31.4 QP	40.0	-8.6	1.00 V	319	18.30	13.10
2	136.62	36.1 QP	43.5	-7.4	1.24 V	197	23.10	13.00
3	173.49	27.8 QP	43.5	-15.7	1.50 V	322	14.90	12.90
4	299.62	26.2 QP	46.0	-19.8	1.75 V	346	11.90	14.30
5	466.49	24.7 QP	46.0	-21.3	1.24 V	181	6.30	18.40
6	664.41	25.5 QP	46.0	-20.5	1.24 V	54	2.90	22.60

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



**802.11ac (80MHz)**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Cedric Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	156.03	31.5 QP	43.5	-12.0	1.00 H	263	17.80	13.70
2	239.46	33.1 QP	46.0	-12.9	1.50 H	170	20.90	12.20
3	270.51	30.7 QP	46.0	-15.3	1.50 H	158	17.30	13.40
4	334.54	28.7 QP	46.0	-17.3	1.00 H	155	13.40	15.30
5	664.41	27.6 QP	46.0	-18.4	1.00 H	261	5.00	22.60
6	800.24	26.6 QP	46.0	-19.4	1.25 H	6	1.90	24.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	113.34	35.0 QP	43.5	-8.5	1.00 V	256	23.80	11.20
2	235.58	27.9 QP	46.0	-18.1	1.25 V	307	15.80	12.10
3	532.46	26.5 QP	46.0	-19.5	1.00 V	248	6.50	20.00
4	674.11	24.2 QP	46.0	-21.8	1.50 V	15	1.50	22.70
5	788.60	25.7 QP	46.0	-20.3	1.75 V	15	1.20	24.50
6	924.42	27.6 QP	46.0	-18.4	1.00 V	330	1.30	26.30

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

## 4.2 CONDUCTED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	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 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 4.2.2 TEST INSTRUMENTS

**Tested Date: May 30, 2013**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 09, 2012	Nov. 08, 2013
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 28, 2012	Dec. 27, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 21, 2012	Dec. 20, 2013
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 06, 2012	Jul. 05, 2013
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2.
3. The VCCI Site Registration No. is C-2047.

### 4.2.3 TEST PROCEDURES

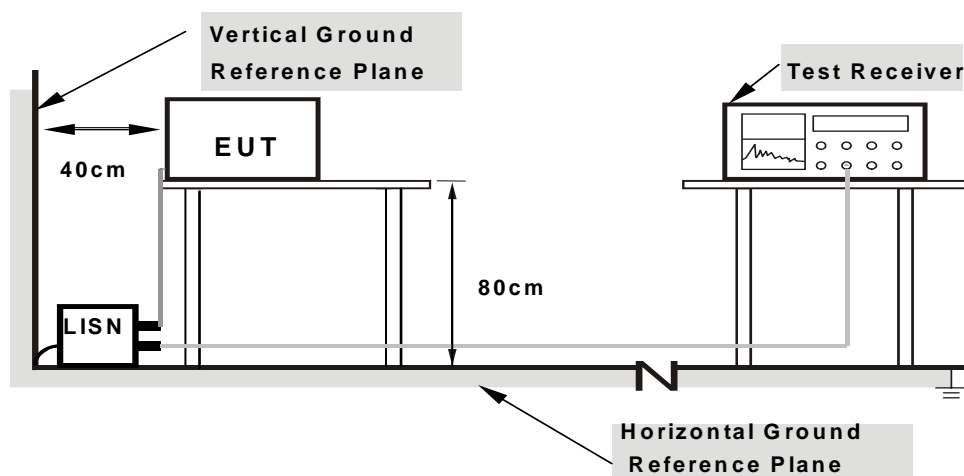
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) 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

Same as 4.1.6.

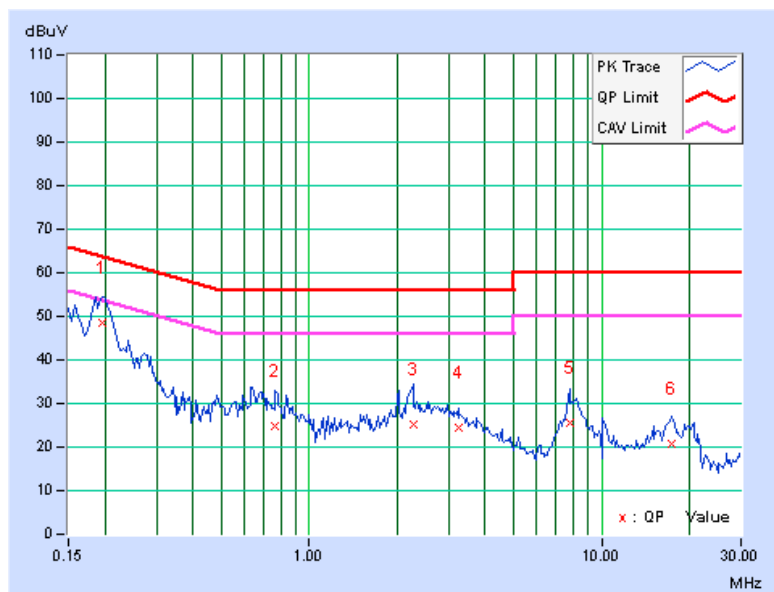
## 4.2.7 TEST RESULTS

### CONDUCTED WORST-CASE DATA : 802.11a

<b>PHASE</b>	Line 1	<b>6dB BANDWIDTH</b>	9kHz
<b>CHANNEL</b>	Channel 64		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.17	48.49	33.68	48.66	33.85	63.74	53.74	-15.08	-19.89
2	0.76719	0.25	24.71	16.05	24.96	16.30	56.00	46.00	-31.04	-29.70
3	2.26172	0.29	24.84	18.36	25.13	18.65	56.00	46.00	-30.87	-27.35
4	3.23828	0.34	24.26	17.63	24.60	17.97	56.00	46.00	-31.40	-28.03
5	7.75781	0.41	25.24	19.12	25.65	19.53	60.00	50.00	-34.35	-30.47
6	17.35156	0.58	20.14	11.35	20.72	11.93	60.00	50.00	-39.28	-38.07

- 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.



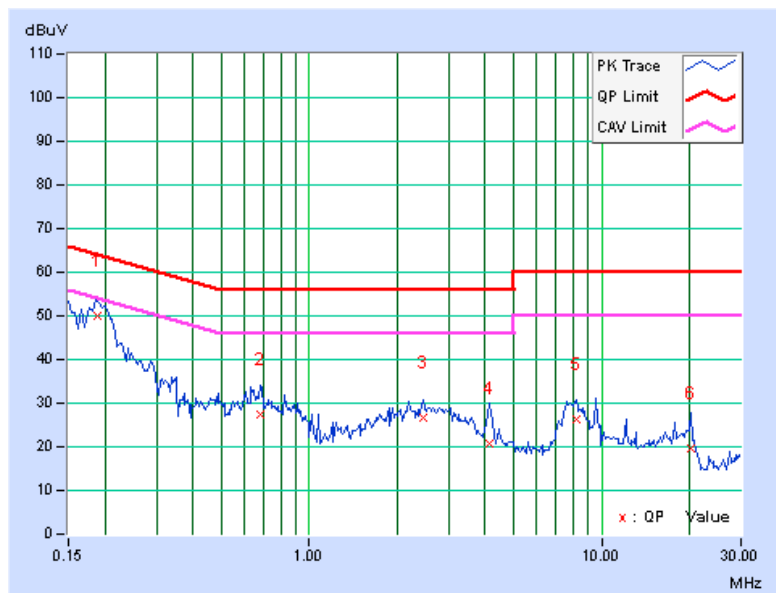


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<b>PHASE</b>	Line 2	<b>6dB BANDWIDTH</b>	9kHz
<b>CHANNEL</b>	Channel 64		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18898	0.18	49.67	35.56	49.85	35.74	64.08	54.08	-14.23	-18.34
2	0.68125	0.24	27.04	17.33	27.28	17.57	56.00	46.00	-28.72	-28.43
3	2.44141	0.30	26.48	20.23	26.78	20.53	56.00	46.00	-29.22	-25.47
4	4.10938	0.39	20.25	13.26	20.64	13.65	56.00	46.00	-35.36	-32.35
5	8.18750	0.45	25.76	19.57	26.21	20.02	60.00	50.00	-33.79	-29.98
6	20.33594	0.73	18.85	12.66	19.58	13.39	60.00	50.00	-40.42	-36.61

- 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.



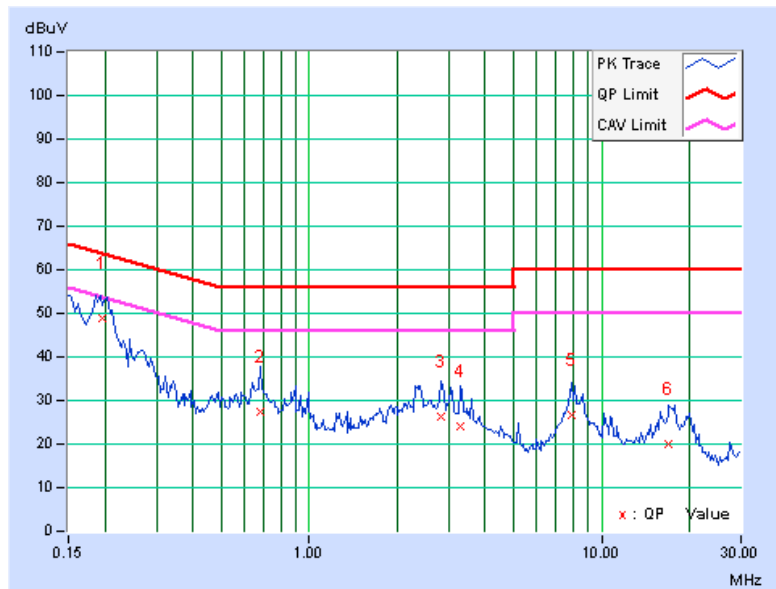


802.11ac (80MHz)

<b>PHASE</b>	Line 1	<b>6dB BANDWIDTH</b>	9kHz
<b>CHANNEL</b>	Channel 106		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19705	0.17	48.55	32.92	48.72	33.09	63.73	53.73	-15.01	-20.64
2	0.68125	0.24	27.12	16.85	27.36	17.09	56.00	46.00	-28.64	-28.91
3	2.82031	0.32	25.95	19.64	26.27	19.96	56.00	46.00	-29.73	-26.04
4	3.28516	0.34	23.75	17.50	24.09	17.84	56.00	46.00	-31.91	-28.16
5	7.88281	0.41	26.08	19.83	26.49	20.24	60.00	50.00	-33.51	-29.76
6	17.04297	0.58	19.50	10.44	20.08	11.02	60.00	50.00	-39.92	-38.98

- 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.



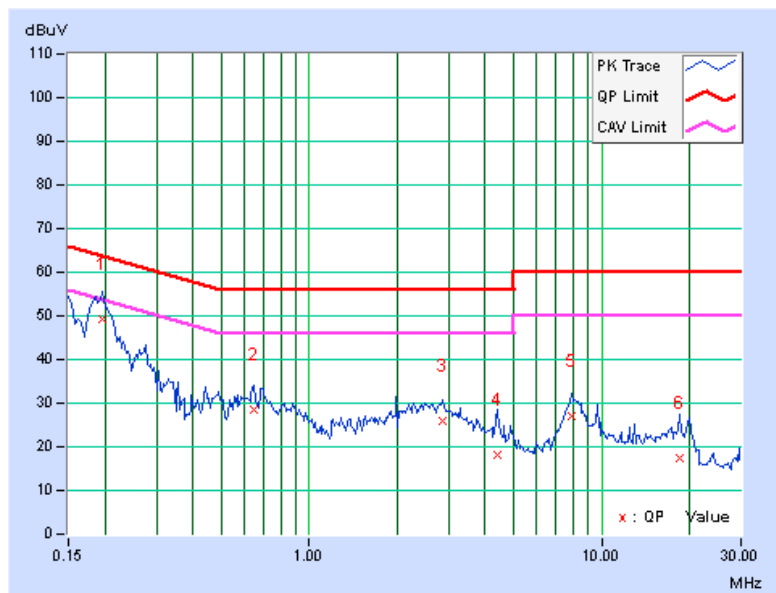


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PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 106		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19687	0.18	49.23	34.17	49.41	34.35	63.74	53.74	-14.33	-19.39
2	0.64609	0.24	28.40	16.16	28.64	16.40	56.00	46.00	-27.36	-29.60
3	2.86719	0.33	25.63	19.79	25.96	20.12	56.00	46.00	-30.04	-25.88
4	4.42578	0.40	17.79	12.58	18.19	12.98	56.00	46.00	-37.81	-33.02
5	7.93359	0.45	26.50	20.43	26.95	20.88	60.00	50.00	-33.05	-29.12
6	18.46875	0.69	16.73	10.19	17.42	10.88	60.00	50.00	-42.58	-39.12

- 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 PEAK TRANSMIT POWER MEASUREMENT

#### 4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

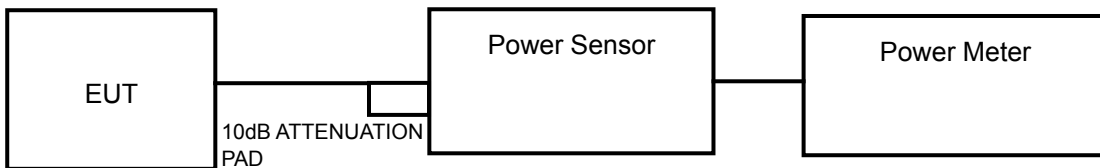
FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

**NOTE:** Where B is the 26dB emission bandwidth in MHz.

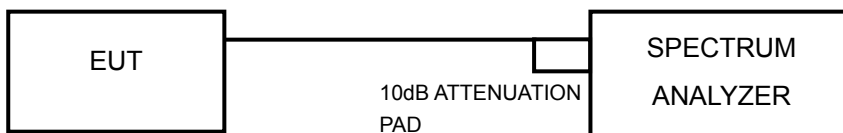
#### 4.3.2 TEST SETUP

##### FOR POWER OUTPUT MEASUREMENT

For 802.11a, 802.11n (20MHz), 802.11n (40MHz)



For 802.11ac (80MHz)



##### FOR 26dB BANDWIDTH





### 4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

### 4.3.4 TEST PROCEDURE

#### FOR AVERAGE POWER MEASUREMENT

##### For 802.11a, 802.11n (20MHz), 802.11n (40MHz)

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.

##### For 802.11ac (80MHz)

Method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz.
- 3) Set VBW  $\geq$  3 MHz.
- 4) Number of points in sweep  $\geq$  2 Span / RBW.
- 5) Sweep time = auto.
- 6) Set trigger to free run (duty cycle  $\geq$  98 percent); Set video trigger (duty cycle  $<$  98 percent)
- 7) Detector = RMS.
- 8) Trace average at least 100 traces in power averaging mode
- 9) Compute power by integrating the spectrum across the 26 dB EBW of the signal.

#### FOR 26dB BANDWIDTH

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

#### 4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

### 4.3.7 TEST RESULTS

#### POWER OUTPUT:

##### 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	33.806	15.29	17	PASS
40	5200	<b>33.963</b>	15.31	17	PASS
48	5240	33.343	15.23	17	PASS
52	5260	34.514	15.38	24	PASS
60	5300	34.674	15.40	24	PASS
64	5320	<b>34.754</b>	15.41	24	PASS
100	5500	31.915	15.04	24	PASS
116	5580	32.885	15.17	24	PASS
140	5700	32.211	15.08	24	PASS

##### 802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	33.037	15.19	17	PASS
40	5200	32.734	15.15	17	PASS
48	5240	33.113	15.20	17	PASS
52	5260	32.659	15.14	24	PASS
60	5300	34.594	15.39	24	PASS
64	5320	34.674	15.40	24	PASS
100	5500	32.659	15.14	24	PASS
116	5580	31.842	15.03	24	PASS
140	5700	31.915	15.04	24	PASS



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### 802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	32.434	15.11	17	PASS
46	5230	33.189	15.21	17	PASS
54	5270	34.674	15.40	24	PASS
62	5310	34.514	15.38	24	PASS
102	5510	32.659	15.14	24	PASS
110	5550	32.434	15.11	24	PASS
134	5670	32.584	15.13	24	PASS

### 802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	33.189	15.21	17	PASS
58	5290	25.351	14.04	24	PASS
106	5530	<b>33.574</b>	15.26	24	PASS



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## 26dB BANDWIDTH:

### 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	20.90	PASS
40	5200	20.91	PASS
48	5240	20.97	PASS
52	5260	20.88	PASS
60	5300	21.14	PASS
64	5320	21.24	PASS
100	5500	21.23	PASS
116	5580	21.87	PASS
140	5700	22.33	PASS

### 802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	21.50	PASS
40	5200	21.24	PASS
48	5240	21.90	PASS
52	5260	21.15	PASS
60	5300	21.83	PASS
64	5320	21.76	PASS
100	5500	21.71	PASS
116	5580	24.47	PASS
140	5700	23.54	PASS



**802.11n (40MHz)**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	45.94	PASS
46	5230	45.39	PASS
54	5270	45.21	PASS
62	5310	45.66	PASS
102	5510	45.84	PASS
110	5550	46.70	PASS
134	5670	51.97	PASS

**802.11ac (80MHz)**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	90.27	PASS
58	5290	89.78	PASS
106	5530	89.79	PASS

## EUT MAXIMUM CONDUCTED POWER

### 802.11a

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	34.754	15.41
5470~5725	32.885	15.17

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

### 802.11n (20MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	34.674	15.40
5470~5725	32.659	15.14

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

### 802.11n (40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	34.674	15.40
5470~5725	32.659	15.14

**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

### 802.11ac (80MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	25.351	14.04
5470~5725	33.574	15.26

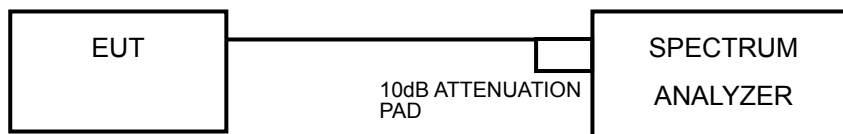
**NOTE:** Manufacturer provides Transmit Power Control description to meet this requirement.

## 4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

### 4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	4dBm
5.250 ~ 5.350GHz	11dBm
5.470 ~ 5.725GHz	11dBm

### 4.4.2 TEST SETUP



### 4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

### 4.4.4 TEST PROCEDURES

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 KHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value



#### 4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

#### 4.4.7 TEST RESULTS

##### 802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	2.14	4	PASS
40	5200	2.37	4	PASS
48	5240	3.23	4	PASS
52	5260	2.22	11	PASS
60	5300	3.35	11	PASS
64	5320	3.81	11	PASS
100	5500	2.71	11	PASS
116	5580	3.55	11	PASS
140	5700	3.02	11	PASS

##### 802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.24	4	PASS
40	5200	2.82	4	PASS
48	5240	2.67	4	PASS
52	5260	2.89	11	PASS
60	5300	3.81	11	PASS
64	5320	4.40	11	PASS
100	5500	2.65	11	PASS
116	5580	2.11	11	PASS
140	5700	2.98	11	PASS



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#### 802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-0.11	4	PASS
46	5230	-0.16	4	PASS
54	5270	-0.19	11	PASS
62	5310	-0.06	11	PASS
102	5510	-0.05	11	PASS
110	5550	-0.50	11	PASS
134	5670	0.02	11	PASS

#### 802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	-2.31	4	PASS
58	5290	-4.15	11	PASS
106	5530	-1.89	11	PASS

## 4.5 PEAK POWER EXCURSION MEASUREMENT

### 4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

### 4.5.2 TEST SETUP



### 4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

### 4.5.4 TEST PROCEDURE

- 1) Set RBW = 1 MHz, VBW  $\geq$  3 MHz, Detector = peak.
- 2) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- 3) Use the peak search function to find the peak of the spectrum.
- 4) Measure the PPSD.
- 5) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

### 4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

### 4.5.6 EUT OPERATING CONDITIONS

Same as 4.2.6

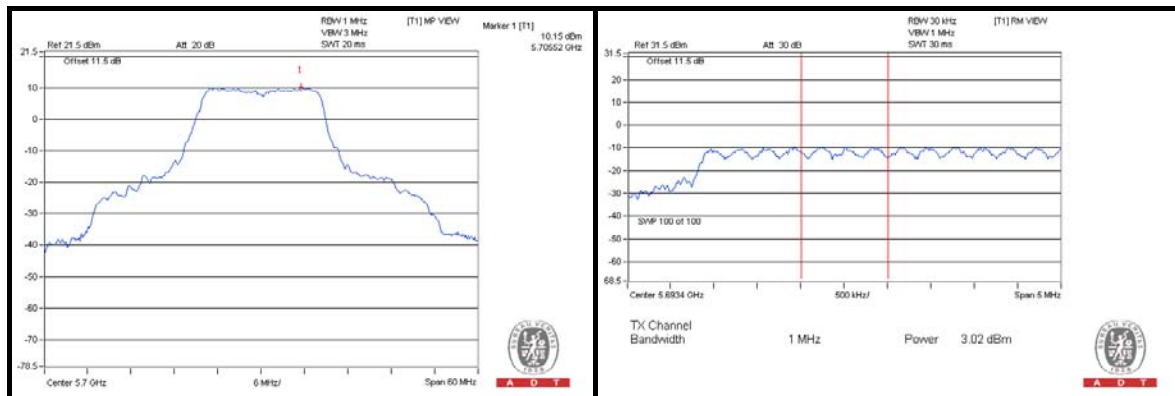


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### 4.5.7 TEST RESULTS

#### 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	9.10	2.14	6.96	13	PASS
40	5200	9.24	2.37	6.87	13	PASS
48	5240	10.04	3.23	6.81	13	PASS
52	5260	9.35	2.22	7.13	13	PASS
60	5300	10.30	3.35	6.95	13	PASS
64	5320	10.56	3.81	6.75	13	PASS
100	5500	9.75	2.71	7.04	13	PASS
116	5580	10.39	3.55	6.84	13	PASS
140	5700	10.15	3.02	7.13	13	PASS

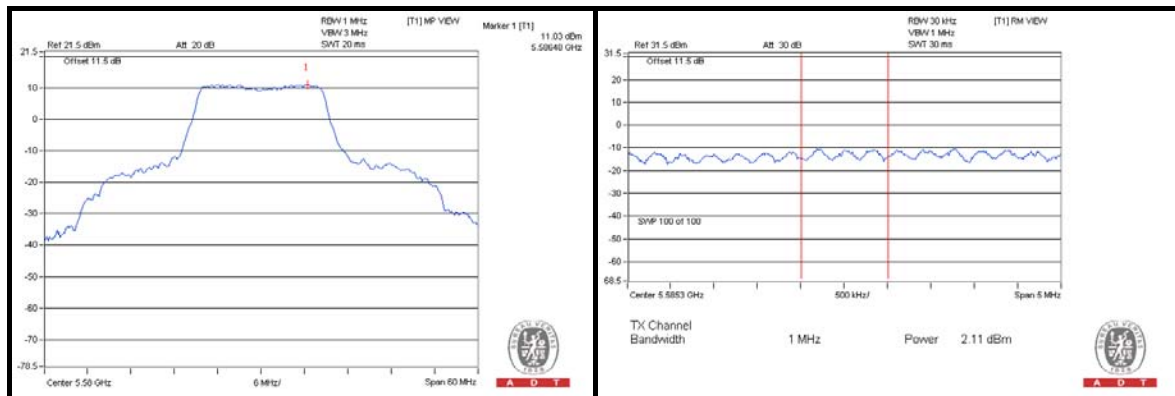




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802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	10.27	3.24	7.03	13	PASS
40	5200	9.92	2.82	7.10	13	PASS
48	5240	10.48	2.67	7.81	13	PASS
52	5260	9.94	2.89	7.05	13	PASS
60	5300	10.96	3.81	7.15	13	PASS
64	5320	11.47	4.40	7.07	13	PASS
100	5500	9.85	2.65	7.20	13	PASS
116	5580	11.03	2.11	8.92	13	PASS
140	5700	10.46	2.98	7.48	13	PASS

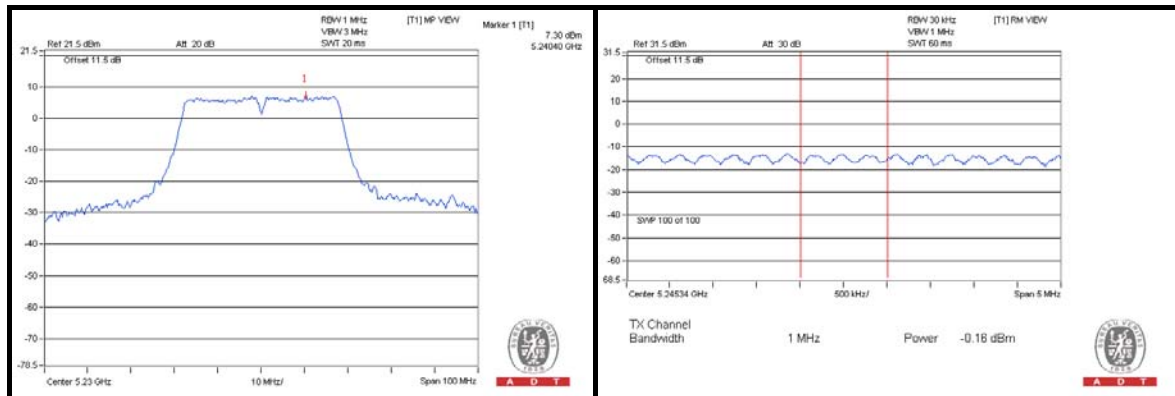




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### 802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
38	5190	7.15	-0.11	7.26	13	PASS
46	5230	7.30	-0.16	7.46	13	PASS
54	5270	7.19	-0.19	7.38	13	PASS
62	5310	7.26	-0.06	7.32	13	PASS
102	5510	7.35	-0.05	7.40	13	PASS
110	5550	6.55	-0.50	7.05	13	PASS
134	5670	7.19	0.02	7.17	13	PASS

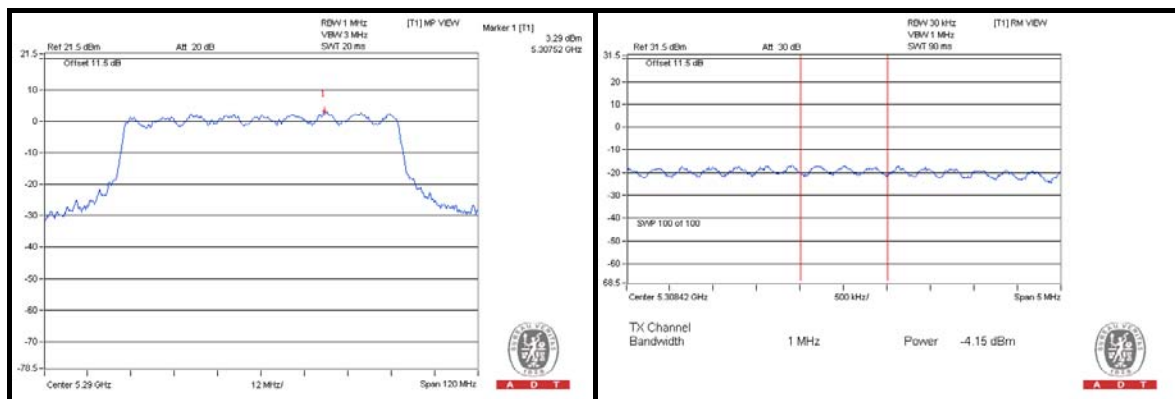




A D T

### 802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
42	5210	5.10	-2.31	7.41	13	PASS
58	5290	3.29	-4.15	7.44	13	PASS
106	5530	5.35	-1.89	7.24	13	PASS



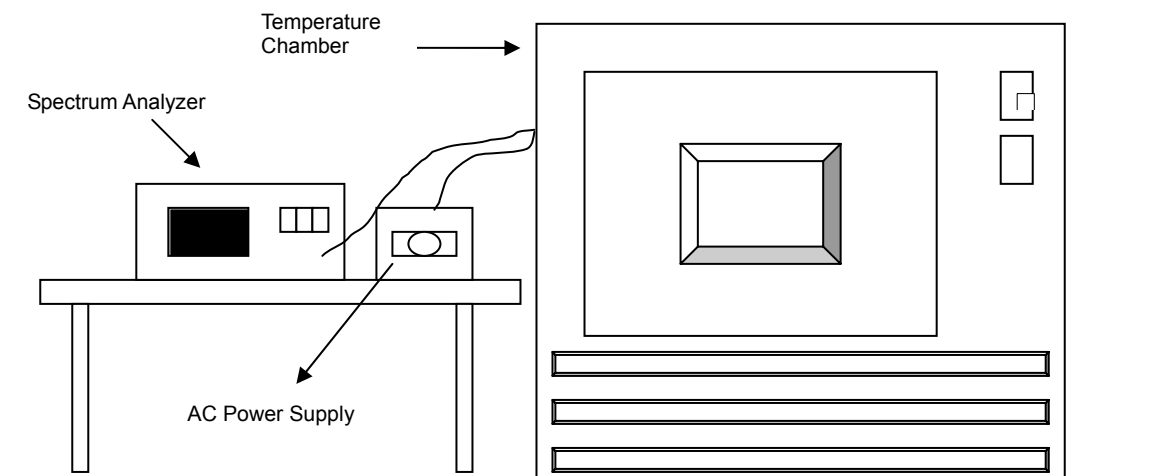


## 4.6 FREQUENCY STABILITY

### 4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

### 4.6.2 TEST SETUP



### 4.6.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

#### 4.6.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

#### 4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.6.6 EUT OPERATING CONDITION

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

#### 4.6.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
60	120	5180.0209	0.00040	5180.0257	0.00050	5180.0239	0.00046	5180.0235	0.00045
50	120	5180.0216	0.00042	5180.0256	0.00049	5180.0230	0.00044	5180.0239	0.00046
40	120	5179.9822	-0.00034	5179.9874	-0.00024	5179.9896	-0.00020	5179.9813	-0.00036
30	120	5180.0056	0.00011	5180.0082	0.00016	5180.0142	0.00027	5180.0044	0.00008
20	120	5179.9926	-0.00014	5179.9922	-0.00015	5179.9898	-0.00020	5179.9903	-0.00019
10	120	5180.0139	0.00027	5180.0131	0.00025	5180.0103	0.00020	5180.0152	0.00029
0	120	5180.0178	0.00034	5180.0186	0.00036	5180.0160	0.00031	5180.0177	0.00034
-10	120	5179.9975	-0.00005	5179.9966	-0.00007	5180.0012	0.00002	5180.0010	0.00002
-20	120	5180.0071	0.00014	5180.0048	0.00009	5180.0041	0.00008	5180.0045	0.00009
-30	120	5180.0005	0.00001	5180.0008	0.00002	5179.998	-0.00004	5179.9979	-0.00004

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9930	-0.00014	5179.9934	-0.00013	5179.9905	-0.00018	5179.9909	-0.00018
	120	5179.9926	-0.00014	5179.9922	-0.00015	5179.9898	-0.00020	5179.9903	-0.00019
	102	5179.9927	-0.00014	5179.9928	-0.00014	5179.9908	-0.00018	5179.992	-0.00015

## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



## 6. INFORMATION ON THE TESTING LABORATORIES

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

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

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

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

## 7. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---