FCC TEST REPORT (15.407)

REPORT NO.:	RF111122C09-1
MODEL NO.:	WNDA4100
FCC ID:	PY311300176
RECEIVED:	Nov. 22, 2011
TESTED:	Nov. 24 ~ Dec. 22, 2011
ISSUED:	Dec. 30, 2011

APPLICANT:	NETGEAR, INC.
ADDRESS:	350 East Plumeria Drive San Jose, CA 95134

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Dec. 30, 2011

1. CERTIFICATION

PRODUCT:	N900 Wireless Dual Band USB Adapter
MODEL:	WNDA4100
BRAND:	NETGEAR
APPLICANT:	NETGEAR, INC.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Nov. 24 ~ Dec. 22, 2011
STANDARDS:	**FCC Part 15, Subpart E (Section 15.407)**
	ANSI C63.4-2003
	ANSI C63.10-2009

The above equipment (Model: WNDA4100) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , DATE: Dec. 30, 2011
Ivy Lin / Specialist

APPROVED BY : _____ DATE: Dec. 30, 2011
Gary Chang / Technical 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 AND LIMIT**	**RESULT**	**REMARK**
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -7.46dB at 0.271MHz.
15.407(b/1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.1dB at 78.51MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	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	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 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

EUT	N900 Wireless Dual Band USB Adapter
MODEL NO.	WNDA4100
FCC ID	PY311300176
POWER SUPPLY	5Vdc (Host equipment)
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n (20MHz): up to 450.0Mbps
OPERATING FREQUENCY	5180 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5320MHz: 8 for 802.11a, 802.11n (20MHz) 4 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)
OUTPUT POWER	32.2mW for 5180 ~ 5240MHz 118.5mW for 5260 ~ 5320MHz 124.2mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with 3.0dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	1.0m shielded USB cable without core (for Cradle)
I/O PORTS	USB
ACCESSORY DEVICES	Cradle

NOTE:

1. The frequency bands used in this EUT are listed as follows:

Frequency Band (MHz)	2412~2462	5180~5320	5500~5700	5745~5825
802.11b	√			
802.11g	√			
802.11a		√	√	√
802.11n (20MHz)	√	√	√	√
802.11n (40MHz)	√	√	√	√

2. The EUT has disabled the 5600-5650MHz band by S/W to avoid 5600-5650MHz band for FCC certification.

3. The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and three receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	3TX
802.11n (40MHz)	3TX

4. After pre-testing, the EUT with cradle is the worst case for final test.
5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5320MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

FOR 5500 ~ 5700MHz

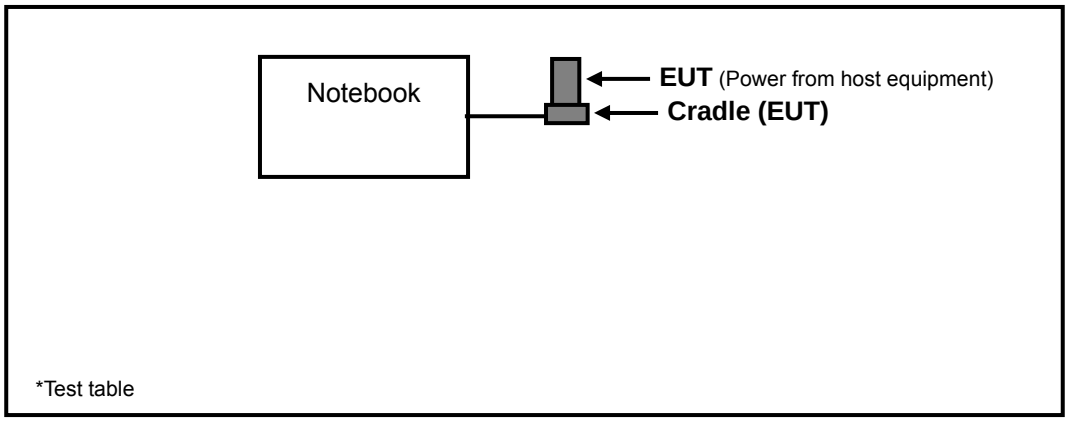
8 channels are provided for 802.11a, 802.11n (20MHz):

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		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	The EUT with cradle

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement
NOTE: "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations 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	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
-	802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0
--	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	7.2
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0

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)
-	802.11n (20MHz)	5180-5320	36 to 64	64	OFDM	BPSK	7.2
-	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	7.2

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)
-	802.11n (20MHz)	5180-5320	36 to 64	64	OFDM	BPSK	7.2
-	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	7.2

BANDEDGE MEASUREMENT:

☒ 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	36, 48, 52, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 64	36, 48, 52, 64	OFDM	BPSK	7.2
-	802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0
--	802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	7.2
-	802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	15.0

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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
-	802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0
--	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	7.2
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
PLC	26deg. C, 65%RH	120Vac, 60Hz	Antony Lee
APCM	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu, Mark Liao

3.3 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)
ANSI C63.4-2003
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.

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	NA	NA

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

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

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

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. As shown in 15.35(b), 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

FREQUENCIES (MHz)	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m) *NOTE 3
	PK	PK
5150 ~ 5350	-27	68.3
5470 ~ 5725	-27	68.3

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

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 13, 2011	Apr. 12, 2012
HORN Antenna SCHWARZBECK	9120D	209	Aug. 25, 2011	Aug. 24, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Preamplifier Agilent	8447D	2944A10633	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01964	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 30, 2011	Aug. 29, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 30, 2011	Aug. 29, 2012
Software ADT.	ADT_Radiated_V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 2012
High Speed Peak Power Meter	ML2495A	0842014	Apr. 26, 2011	Apr. 25, 2012
Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012

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 3.

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 988962.

5. The IC Site Registration No. is IC 7450F-3.

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 camber. 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.

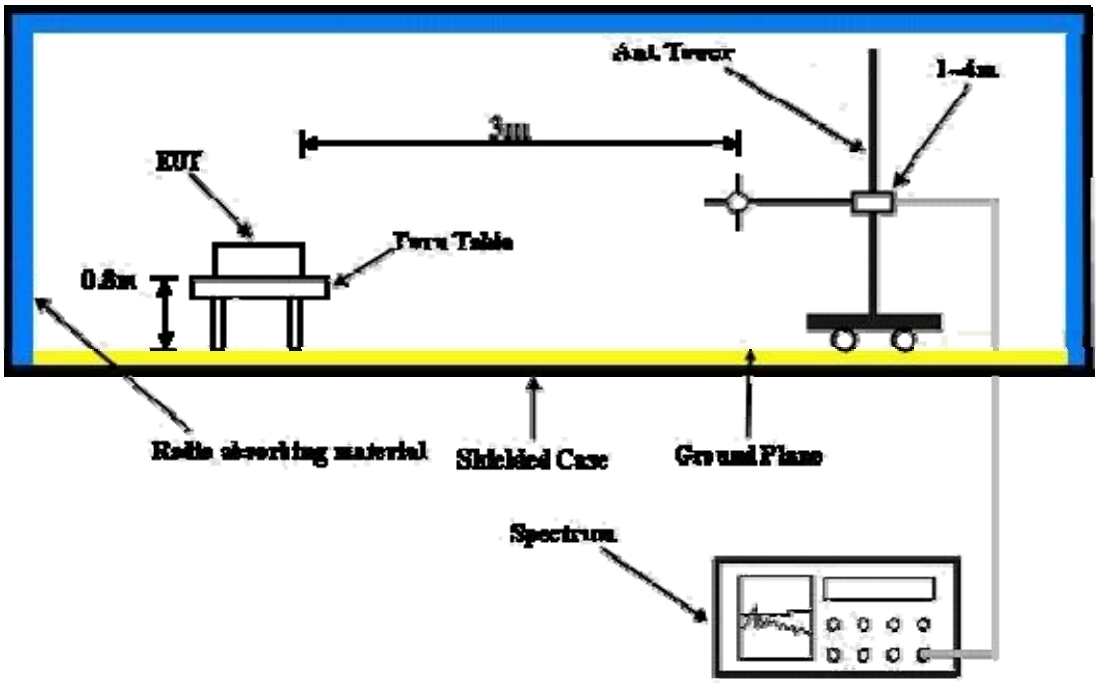
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) 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 10Hz 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

a. Connected EUT to a notebook system with USB cable and placed on a testing table.
b. The notebook ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
c. The necessary accessories enable the system in full functions.

4.1.8 TEST RESULTS

802.11a

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

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	5127.50	54.7 PK	74.0	-19.3	1.00 H	37	17.20	37.50
2	5127.50	42.3 AV	54.0	-11.7	1.00 H	37	4.80	37.50
3	5150.00	47.7 PK	74.0	-26.3	1.00 H	36	10.20	37.50
4	5150.00	36.9 AV	54.0	-17.1	1.00 H	36	-0.60	37.50
5	*5180.00	103.9 PK			1.00 H	36	66.40	37.50
6	*5180.00	93.0 AV			1.00 H	36	55.50	37.50
7	#10360.00	56.5 PK	68.3	-11.8	1.10 H	293	8.20	48.30
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	5127.50	52.0 PK	74.0	-22.0	1.42 V	78	14.50	37.50
2	5127.50	39.5 AV	54.0	-14.5	1.42 V	78	2.00	37.50
3	5150.00	54.6 PK	74.0	-19.4	1.42 V	70	17.10	37.50
4	5150.00	39.8 AV	54.0	-14.2	1.42 V	70	2.30	37.50
5	*5180.00	103.5 PK			1.42 V	70	66.00	37.50
6	*5180.00	92.9 AV			1.42 V	70	55.40	37.50
7	#10360.00	55.5 PK	68.3	-12.8	1.10 V	227	7.20	48.30

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 the restricted band.

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

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	103.7 PK			1.00 H	69	66.20	37.50
2	*5200.00	92.8 AV			1.00 H	69	55.30	37.50
3	#10400.00	56.0 PK	68.3	-12.3	1.00 H	155	7.60	48.40
4	15600.00	57.0 PK	74.0	-17.0	1.10 H	219	8.50	48.50
5	15600.00	44.3 AV	54.0	-9.7	1.10 H	219	-4.20	48.50
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	*5200.00	103.2 PK			1.45 V	98	65.70	37.50
2	*5200.00	92.3 AV			1.45 V	98	54.80	37.50
3	#10400.00	55.3 PK	68.3	-13.0	1.00 V	15	6.90	48.40
4	15600.00	56.1 PK	74.0	-17.9	1.00 V	114	7.60	48.50
5	15600.00	43.4 AV	54.0	-10.6	1.00 V	114	-5.10	48.50

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.
6. "#":The radiated frequency is out the restricted band.

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

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	103.8 PK			1.00 H	57	66.20	37.60
2	*5240.00	92.8 AV			1.00 H	57	55.20	37.60
3	#10400.00	56.0 PK	68.3	-12.3	1.00 H	176	7.60	48.40
4	15600.00	57.7 PK	74.0	-16.3	1.00 H	190	9.20	48.50
5	15600.00	44.9 AV	54.0	-9.1	1.00 H	190	-3.60	48.50
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	*5240.00	103.0 PK			1.40 V	116	65.40	37.60
2	*5240.00	92.0 AV			1.40 V	116	54.40	37.60
3	#10400.00	55.4 PK	68.3	-12.9	1.00 V	233	7.00	48.40
4	15600.00	56.3 PK	74.0	-17.7	1.00 V	108	7.80	48.50
5	15600.00	43.6 AV	54.0	-10.4	1.00 V	108	-4.90	48.50

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.
6. "#":The radiated frequency is out the restricted band.

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

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	*5260.00	106.6 PK			1.40 H	67	69.00	37.60
2	*5260.00	95.6 AV			1.40 H	67	58.00	37.60
3	#10520.00	58.2 PK	68.3	-10.1	1.00 H	227	9.70	48.50
4	15780.00	56.7 PK	74.0	-17.3	1.00 H	187	8.70	48.00
5	15780.00	44.7 AV	54.0	-9.3	1.00 H	187	-3.30	48.00
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	*5260.00	105.4 PK			1.20 V	119	67.80	37.60
2	*5260.00	94.8 AV			1.20 V	119	57.20	37.60
3	#10520.00	57.5 PK	68.3	-10.8	1.00 V	101	9.00	48.50
4	15780.00	55.4 PK	74.0	-18.6	1.00 V	132	7.40	48.00
5	15780.00	43.5 AV	54.0	-10.5	1.00 V	132	-4.50	48.00

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 the restricted band.

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

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	106.5 PK			1.35 H	46	68.80	37.70
2	*5300.00	95.5 AV			1.35 H	46	57.80	37.70
3	10600.00	56.9 PK	74.0	-17.1	1.00 H	157	8.30	48.60
4	10600.00	45.2 AV	54.0	-8.8	1.00 H	157	-3.40	48.60
5	15900.00	55.1 PK	74.0	-18.9	1.00 H	310	7.40	47.70
6	15900.00	44.0 AV	54.0	-10.0	1.00 H	310	-3.70	47.70
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	*5300.00	105.5 PK			1.41 V	76	67.80	37.70
2	*5300.00	94.9 AV			1.41 V	76	57.20	37.70
3	10600.00	56.0 PK	74.0	-18.0	1.00 V	231	7.40	48.60
4	10600.00	44.1 AV	54.0	-9.9	1.00 V	231	-4.50	48.60
5	15900.00	54.5 PK	74.0	-19.5	1.00 V	174	6.80	47.70
6	15900.00	43.1 AV	54.0	-10.9	1.00 V	174	-4.60	47.70

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, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	106.4 PK			1.44 H	0	68.70	37.70
2	*5320.00	95.7 AV			1.44 H	0	58.00	37.70
3	5350.00	57.7 PK	74.0	-16.3	1.46 H	0	19.90	37.80
4	5350.00	44.3 AV	54.0	-9.7	1.46 H	0	6.50	37.80
5	5372.00	57.9 PK	74.0	-16.1	1.46 H	0	20.10	37.80
6	5372.00	46.7 AV	54.0	-7.3	1.46 H	0	8.90	37.80
7	10640.00	58.0 PK	74.0	-16.0	1.10 H	187	9.30	48.70
8	10640.00	44.9 AV	54.0	-9.1	1.10 H	187	-3.80	48.70
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	*5320.00	105.9 PK			1.15 V	315	68.20	37.70
2	*5320.00	95.0 AV			1.15 V	315	57.30	37.70
3	5350.00	59.9 PK	74.0	-14.1	1.15 V	315	22.10	37.80
4	5350.00	45.5 AV	54.0	-8.5	1.15 V	315	7.70	37.80
5	5372.00	55.0 PK	74.0	-19.0	1.15 V	315	17.20	37.80
6	5372.00	45.7 AV	54.0	-8.3	1.15 V	315	7.90	37.80
7	10640.00	57.1 PK	74.0	-16.9	1.00 V	154	8.40	48.70
8	10640.00	43.8 AV	54.0	-10.2	1.00 V	154	-4.90	48.70

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, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	5447.00	58.6 PK	74.0	-15.4	1.38 H	26	20.70	37.90
2	5447.00	46.4 AV	54.0	-7.6	1.38 H	26	8.50	37.90
3	5460.00	59.5 PK	74.0	-14.5	1.38 H	26	21.60	37.90
4	5460.00	45.5 AV	54.0	-8.5	1.38 H	26	7.60	37.90
5	#5470.00	66.6 PK	68.3	-1.7	1.38 H	26	28.70	37.90
6	*5500.00	111.7 PK			1.38 H	26	73.70	38.00
7	*5500.00	100.7 AV			1.38 H	26	62.70	38.00
8	11000.00	58.8 PK	74.0	-15.2	1.10 H	129	9.60	49.20
9	11000.00	45.8 AV	54.0	-8.2	1.10 H	129	-3.40	49.20
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	57.0 PK	74.0	-17.0	1.19 V	75	19.10	37.90
2	5460.00	42.8 AV	54.0	-11.2	1.19 V	75	4.90	37.90
3	#5470.00	61.6 PK	68.3	-6.7	1.19 V	75	23.70	37.90
4	*5500.00	106.6 PK			1.19 V	75	68.60	38.00
5	*5500.00	95.6 AV			1.19 V	75	57.60	38.00
6	11000.00	56.8 PK	74.0	-17.2	1.11 V	274	7.60	49.20
7	11000.00	44.7 AV	54.0	-9.3	1.11 V	274	-4.50	49.20

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 the restricted band.

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

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	111.5 PK			1.40 H	49	73.40	38.10
2	*5580.00	100.5 AV			1.40 H	49	62.40	38.10
3	11160.00	58.8 PK	74.0	-15.2	1.10 H	118	9.70	49.10
4	11160.00	45.7 AV	54.0	-8.3	1.10 H	118	-3.40	49.10
5	#16740.00	60.2 PK	68.3	-8.1	1.00 H	157	10.70	49.50
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	*5580.00	106.7 PK			1.20 V	146	68.60	38.10
2	*5580.00	95.7 AV			1.20 V	146	57.60	38.10
3	11160.00	57.4 PK	74.0	-16.6	1.00 V	136	8.30	49.10
4	11160.00	44.3 AV	54.0	-9.7	1.00 V	136	-4.80	49.10
5	#16740.00	59.1 PK	68.3	-9.2	1.00 V	360	9.60	49.50

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.
6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	*5660.00	111.6 PK			1.35 H	114	73.40	38.20
2	*5660.00	100.5 AV			1.35 H	114	62.30	38.20
3	11320.00	56.6 PK	74.0	-17.4	1.00 H	181	7.60	49.00
4	11320.00	44.7 AV	54.0	-9.3	1.00 H	181	-4.30	49.00
5	#16980.00	59.8 PK	68.3	-8.5	1.00 H	278	9.40	50.40
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	5660.00	106.7 PK			1.20 V	110	68.50	38.20
2	5660.00	95.8 AV			1.20 V	110	57.60	38.20
3	11320.00	56.0 PK	74.0	-18.0	1.00 V	111	7.00	49.00
4	11320.00	44.1 AV	54.0	-9.9	1.00 V	276	-4.90	49.00
5	#16980.00	59.4 PK	68.3	-8.9	1.00 V	276	9.00	50.40

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 the restricted band.

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

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	110.1 PK			1.33 H	24	71.80	38.30
2	*5700.00	99.1 AV			1.33 H	24	60.80	38.30
3	#5725.00	62.2 PK	68.3	-6.1	1.33 H	24	23.80	38.40
4	11400.00	58.7 PK	74.0	-15.3	1.00 H	124	9.70	49.00
5	11400.00	44.8 AV	54.0	-9.2	1.00 H	124	-4.20	49.00
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	*5700.00	105.2 PK			1.06 V	24	66.90	38.30
2	*5700.00	94.2 AV			1.06 V	24	55.90	38.30
3	#5725.00	65.6 PK	68.3	-2.7	1.06 V	24	27.20	38.40
4	11400.00	59.8 PK	74.0	-14.2	1.10 V	256	10.80	49.00
5	11400.00	45.6 AV	54.0	-8.4	1.10 V	256	-3.40	49.00

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 the restricted band.

802.11n (20MHz)

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

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	47.2 PK	74.0	-26.8	1.03 H	351	9.70	37.50
2	5150.00	36.3 AV	54.0	-17.7	1.03 H	351	-1.20	37.50
3	*5180.00	104.0 PK			1.03 H	351	66.50	37.50
4	*5180.00	93.2 AV			1.03 H	351	55.70	37.50
5	#10360.00	57.4 PK	68.3	-10.9	1.10 H	326	9.10	48.30
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	46.5 PK	74.0	-27.5	1.00 V	13	9.00	37.50
2	5150.00	34.4 AV	54.0	-19.6	1.00 V	13	-3.10	37.50
3	*5180.00	101.2 PK			1.00 V	55	63.70	37.50
4	*5180.00	90.2 AV			1.00 V	55	52.70	37.50
5	#10360.00	55.5 PK	68.3	-12.8	1.00 V	210	7.20	48.30

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 the restricted band.

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

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	104.2 PK			1.10 H	327	66.70	37.50
2	*5200.00	93.4 AV			1.10 H	327	55.90	37.50
3	#10400.00	55.6 PK	68.3	-12.7	1.00 H	196	7.20	48.40
4	15600.00	59.0 PK	74.0	-15.0	1.00 H	278	10.50	48.50
5	15600.00	45.4 AV	54.0	-8.6	1.00 H	278	-3.10	48.50
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	*5200.00	101.4 PK			1.05 V	214	63.90	37.50
2	*5200.00	90.3 AV			1.05 V	214	52.80	37.50
3	#10400.00	56.9 PK	68.3	-11.4	1.00 V	169	8.50	48.40
4	15600.00	56.2 PK	74.0	-17.8	1.10 V	159	7.70	48.50
5	15600.00	44.4 AV	54.0	-9.6	1.10 V	159	-4.10	48.50

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.
6. "#":The radiated frequency is out the restricted band.

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

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	104.4 PK			1.15 H	274	66.80	37.60
2	*5240.00	93.6 AV			1.15 H	274	56.00	37.60
3	#10480.00	56.9 PK	68.3	-11.4	1.11 H	216	8.40	48.50
4	15720.00	57.2 PK	74.0	-16.8	1.00 H	348	9.00	48.20
5	15720.00	44.7 AV	54.0	-9.3	1.00 H	348	-3.50	48.20
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	*5240.00	101.3 PK			1.20 V	167	63.70	37.60
2	*5240.00	90.4 AV			1.20 V	167	52.80	37.60
3	#10480.00	55.6 PK	68.3	-12.7	1.00 V	277	7.10	48.50
4	15720.00	56.2 PK	74.0	-17.8	1.10 V	223	8.00	48.20
5	15720.00	44.0 AV	54.0	-10.0	1.10 V	223	-4.20	48.20

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 the restricted band.

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

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	*5260.00	112.3 PK			1.00 H	198	74.70	37.60
2	*5260.00	101.2 AV			1.00 H	198	63.60	37.60
3	#10520.00	58.2 PK	68.3	-10.1	1.00 H	185	9.70	48.50
4	15780.00	56.9 PK	74.0	-17.1	1.00 H	360	8.90	48.00
5	15780.00	43.5 AV	54.0	-10.5	1.00 H	360	-4.50	48.00
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	*5260.00	109.3 PK			1.15 V	117	71.70	37.60
2	*5260.00	98.6 AV			1.15 V	117	61.00	37.60
3	#10520.00	57.1 PK	68.3	-11.2	1.00 V	214	8.60	48.50
4	15780.00	56.0 PK	74.0	-18.0	1.00 V	139	8.00	48.00
5	15780.00	43.0 AV	54.0	-11.0	1.00 V	139	-5.00	48.00

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 the restricted band.

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

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	112.4 PK			1.00 H	253	74.70	37.70
2	*5300.00	101.4 AV			1.00 H	253	63.70	37.70
3	#10600.00	56.9 PK	68.3	-11.4	1.00 H	323	8.30	48.60
4	15900.00	57.7 PK	74.0	-16.3	1.00 H	243	10.00	47.70
5	15900.00	44.6 AV	54.0	-9.4	1.00 H	243	-3.10	47.70
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	*5300.00	109.6 PK			1.10 V	147	71.90	37.70
2	*5300.00	98.5 AV			1.10 V	147	60.80	37.70
3	#10600.00	56.0 PK	68.3	-12.3	1.00 V	246	7.40	48.60
4	15900.00	56.1 PK	74.0	-17.9	1.00 V	169	8.40	47.70
5	15900.00	43.2 AV	54.0	-10.8	1.00 V	169	-4.50	47.70

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.

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

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	112.6 PK			1.00 H	163	74.90	37.70
2	*5320.00	101.9 AV			1.00 H	163	64.20	37.70
3	5350.00	60.2 PK	74.0	-13.8	1.00 H	155	22.40	37.80
4	5350.00	44.3 AV	54.0	-9.7	1.00 H	155	6.50	37.80
5	5372.00	56.2 PK	74.0	-17.8	1.00 H	155	18.40	37.80
6	5372.00	45.3 AV	54.0	-8.7	1.00 H	155	7.50	37.80
7	10640.00	56.9 PK	74.0	-17.1	1.00 H	139	8.20	48.70
8	10640.00	44.3 AV	54.0	-9.7	1.00 H	139	-4.40	48.70
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	*5320.00	109.1 PK			1.12 V	45	71.40	37.70
2	*5320.00	98.3 AV			1.12 V	45	60.60	37.70
3	5350.00	58.1 PK	74.0	-15.9	1.12 V	45	20.30	37.80
4	5350.00	42.6 AV	54.0	-11.4	1.12 V	45	4.80	37.80
5	5372.00	56.2 PK	74.0	-17.8	1.13 V	45	18.40	37.80
6	5372.00	46.2 AV	54.0	-7.8	1.13 V	45	8.40	37.80
7	10640.00	58.0 PK	74.0	-16.0	1.20 V	216	9.30	48.70
8	10640.00	44.8 AV	54.0	-9.2	1.20 V	216	-3.90	48.70

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, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	56.0 PK	74.0	-18.0	1.09 H	160	18.10	37.90
2	5460.00	42.2 AV	54.0	-11.8	1.09 H	160	4.30	37.90
3	#5470.00	67.3 PK	68.3	-1.0	1.09 H	160	29.40	37.90
4	*5500.00	111.6 PK			1.08 H	171	73.60	38.00
5	*5500.00	100.4 AV			1.08 H	171	62.40	38.00
6	11000.00	58.1 PK	74.0	-15.9	1.00 H	157	8.90	49.20
7	11000.00	46.3 AV	54.0	-7.7	1.00 H	157	-2.90	49.20
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	51.8 PK	74.0	-22.2	1.00 V	166	13.90	37.90
2	5460.00	38.5 AV	54.0	-15.5	1.00 V	166	0.60	37.90
3	#5470.00	57.5 PK	68.3	-10.8	1.00 V	166	19.60	37.90
4	*5500.00	109.0 PK			1.00 V	166	71.00	38.00
5	*5500.00	98.1 AV			1.00 V	166	60.10	38.00
6	11000.00	57.7 PK	74.0	-16.3	1.00 V	203	8.50	49.20
7	11000.00	45.1 AV	54.0	-8.9	1.00 V	203	-4.10	49.20

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 the restricted band.

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

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	111.4 PK			1.10 H	213	73.30	38.10
2	*5580.00	100.1 AV			1.10 H	213	62.00	38.10
3	11160.00	58.6 PK	74.0	-15.4	1.10 H	318	9.50	49.10
4	11160.00	45.7 AV	54.0	-8.3	1.10 H	318	-3.40	49.10
5	#16730.00	58.2 PK	68.3	-10.1	1.00 H	279	8.70	49.50
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	*5580.00	108.8 PK			1.00 V	181	70.70	38.10
2	*5580.00	97.7 AV			1.00 V	181	59.60	38.10
3	11160.00	58.0 PK	74.0	-16.0	1.00 V	209	8.90	49.10
4	11160.00	45.1 AV	54.0	-8.9	1.00 V	156	-4.00	49.10
5	#16730.00	57.1 PK	68.3	-11.2	1.00 V	156	7.60	49.50

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.
6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	*5660.00	111.3 PK			1.10 H	157	73.10	38.20
2	*5660.00	100.3 AV			1.10 H	157	62.10	38.20
3	11320.00	59.1 PK	74.0	-14.9	1.00 H	296	10.10	49.00
4	11320.00	45.8 AV	54.0	-8.2	1.00 H	296	-3.20	49.00
5	#16970.00	59.9 PK	68.3	-8.4	1.00 H	177	9.60	50.30
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	*5660.00	109.1 PK			1.00 V	279	70.90	38.20
2	*5660.00	98.2 AV			1.00 V	279	60.00	38.20
3	11320.00	58.3 PK	74.0	-15.7	1.00 V	187	9.30	49.00
4	11320.00	44.7 AV	54.0	-9.3	1.00 V	152	-4.30	49.00
5	#16970.00	58.4 PK	68.3	-9.9	1.00 V	152	8.10	50.30

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 the restricted band.

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

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	111.9 PK			1.14 H	164	73.60	38.30
2	*5700.00	101.0 AV			1.14 H	164	62.70	38.30
3	#5725.00	62.1 PK	68.3	-6.2	1.10 H	144	23.70	38.40
4	11400.00	57.5 PK	74.0	-16.5	1.00 H	297	8.50	49.00
5	11400.00	46.4 AV	54.0	-7.6	1.00 H	297	-2.60	49.00
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	*5700.00	110.1 PK			1.13 V	73	71.80	38.30
2	*5700.00	99.4 AV			1.13 V	73	61.10	38.30
3	#5725.00	62.2 PK	68.3	-6.1	1.13 V	73	23.80	38.40
4	11400.00	56.7 PK	74.0	-17.3	1.10 V	347	7.70	49.00
5	11400.00	44.6 AV	54.0	-9.4	1.10 V	347	-4.40	49.00

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 the restricted band.

802.11n (40MHz)

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

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	52.2 PK	74.0	-21.8	1.12 H	330	14.70	37.50
2	5150.00	39.6 AV	54.0	-14.4	1.12 H	330	2.10	37.50
3	*5190.00	103.5 PK			1.12 H	330	66.00	37.50
4	*5190.00	93.0 AV			1.12 H	330	55.50	37.50
5	#10380.00	56.5 PK	68.3	-11.8	1.00 H	187	8.20	48.30
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	57.3 PK	74.0	-16.7	1.16 V	122	19.80	37.50
2	5150.00	43.8 AV	54.0	-10.2	1.16 V	122	6.30	37.50
3	*5190.00	102.8 PK			1.28 V	66	65.30	37.50
4	*5190.00	92.7 AV			1.28 V	66	55.20	37.50
5	#10380.00	57.6 PK	68.3	-10.7	1.10 V	274	9.30	48.30

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 the restricted band.

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

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	5127.00	52.2 PK	74.0	-21.8	1.05 H	175	14.70	37.50
2	5127.00	39.5 AV	54.0	-14.5	1.05 H	175	2.00	37.50
3	*5230.00	103.2 PK			1.00 H	164	65.60	37.60
4	*5230.00	92.3 AV			1.00 H	164	54.70	37.60
5	#10460.00	56.4 PK	68.3	-11.9	1.10 H	203	7.90	48.50
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	5127.00	52.8 PK	74.0	-21.2	1.44 V	61	15.30	37.50
2	5127.00	40.2 AV	54.0	-13.8	1.44 V	61	2.70	37.50
3	*5230.00	103.1 PK			1.41 V	71	65.50	37.60
4	*5230.00	92.4 AV			1.41 V	71	54.80	37.60
5	#10460.00	57.0 PK	68.3	-11.3	1.10 V	157	8.50	48.50

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.

6. "#":The radiated frequency is out the restricted band.

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

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	*5270.00	109.3 PK			1.01 H	160	71.70	37.60
2	*5270.00	98.5 AV			1.01 H	160	60.90	37.60
3	#10540.00	58.2 PK	68.3	-10.1	1.00 H	211	9.70	48.50
4	15810.00	57.1 PK	74.0	-16.9	1.00 H	234	9.20	47.90
5	15810.00	45.4 AV	54.0	-8.6	1.00 H	145	-2.50	47.90
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	*5270.00	107.5 PK			1.00 V	73	69.90	37.60
2	*5270.00	99.2 AV			1.00 V	73	61.60	37.60
3	#10540.00	59.1 PK	68.3	-9.2	1.00 V	314	10.60	48.50
4	15810.00	58.9 PK	74.0	-15.1	1.10 V	271	11.00	47.90
5	15810.00	46.3 AV	54.0	-7.7	1.10 V	271	-1.60	47.90

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 the restricted band.

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

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	108.8 PK			1.00 H	162	71.00	37.80
2	*5310.00	98.3 AV			1.00 H	162	60.50	37.80
3	5350.00	68.0 PK	74.0	-6.0	1.00 H	159	30.20	37.80
4	5350.00	50.6 AV	54.0	-3.4	1.00 H	159	12.80	37.80
5	5414.00	58.0 PK	74.0	-16.0	1.00 H	159	20.10	37.90
6	5414.00	48.0 AV	54.0	-6.0	1.00 H	159	10.10	37.90
7	10620.00	58.5 PK	74.0	-15.5	1.00 H	125	9.80	48.70
8	10620.00	46.2 AV	54.0	-7.8	1.00 H	125	-2.50	48.70
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	*5310.00	107.8 PK			1.37 V	221	70.00	37.80
2	*5310.00	95.6 AV			1.37 V	221	57.80	37.80
3	5350.00	69.5 PK	74.0	-4.5	1.36 V	222	31.70	37.80
4	5350.00	50.6 AV	54.0	-3.4	1.36 V	222	12.80	37.80
5	5414.00	54.3 PK	74.0	-19.7	1.00 V	134	16.40	37.90
6	5414.00	46.1 AV	54.0	-7.9	1.00 V	134	8.20	37.90
7	10620.00	56.4 PK	74.0	-17.6	1.00 V	136	7.70	48.70
8	10620.00	43.7 AV	54.0	-10.3	1.00 V	136	-5.00	48.70

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 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

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	59.7 PK	74.0	-14.3	1.08 H	172	21.80	37.90
2	5460.00	47.8 AV	54.0	-6.2	1.08 H	172	9.90	37.90
3	#5470.00	66.3 PK	68.3	-2.0	1.08 H	172	28.40	37.90
4	*5510.00	108.6 PK			1.07 H	181	70.60	38.00
5	*5510.00	98.0 AV			1.07 H	181	60.00	38.00
6	11020.00	58.8 PK	74.0	-15.2	1.00 H	287	9.60	49.20
7	11020.00	45.2 AV	54.0	-8.8	1.00 H	287	-4.00	49.20
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	57.8 PK	74.00	-16.2	1.11 V	197	19.90	37.90
2	5460.00	45.2 AV	54.00	-8.8	1.11 V	197	7.30	37.90
3	#5470.00	65.2 PK	68.30	-3.1	1.11 V	197	27.30	37.90
4	*5510.00	106.0 PK			1.00 V	165	68.00	38.00
5	*5510.00	95.1 AV			1.00 V	165	57.10	38.00
6	11020.00	56.8 PK	54.00	-17.2	1.00 V	196	7.6	49.20
7	11020.00	44.9 AV	74.00	-9.1	1.00 V	196	-4.3	49.20

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 the restricted band.

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

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	108.9 PK			1.20 H	198	70.90	38.00
2	*5550.00	98.6 AV			1.20 H	198	60.60	38.00
3	11100.00	57.9 PK	74.0	-16.1	1.00 H	134	8.80	49.10
4	11100.00	45.1 AV	54.0	-8.9	1.00 H	134	-4.00	49.10
5	#16650.00	59.0 PK	68.3	-9.3	1.00 H	224	9.80	49.20
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	*5550.00	106.4 PK			1.10 V	197	68.40	38.00
2	*5550.00	95.5 AV			1.10 V	197	57.50	38.00
3	11100.00	57.5 PK	74.0	-16.5	1.10 V	258	8.40	49.10
4	11100.00	44.8 AV	54.0	-9.2	1.10 V	258	-4.30	49.10
5	#16650.00	59.9 PK	68.3	-8.4	1.00 V	143	10.70	49.20

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 the restricted band.

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

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	109.2 PK			1.03 H	177	70.90	38.30
2	*5670.00	98.7 AV			1.03 H	177	60.40	38.30
3	#5725.00	63.2 PK	68.3	-5.1	1.03 H	169	24.80	38.40
4	11340.00	59.8 PK	74.0	-14.2	1.10 H	226	10.80	49.00
5	11340.00	46.1 AV	54.0	-7.9	1.10 H	226	-2.90	49.00
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	*5670.00	106.9 PK			1.41 V	77	68.60	38.30
2	*5670.00	96.1 AV			1.41 V	77	57.80	38.30
3	#5725.00	55.0 PK	68.3	-13.3	1.37 V	70	16.60	38.40
4	11340.00	57.7 PK	74.0	-16.3	1.10 V	156	8.70	49.00
5	11340.00	45.0 AV	54.0	-9.0	1.10 V	156	-4.00	49.00

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 the restricted band.

BELOW 1GHz WORST-CASE DATA： 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay 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	**78.51**	**38.9 QP**	**40.0**	**-1.1**	**2.00 H**	**328**	**29.30**	**9.60**
2	140.72	28.8 QP	43.5	-14.7	2.00 H	304	14.70	14.10
3	214.61	27.6 QP	43.5	-15.9	1.00 H	313	16.50	11.10
4	329.32	33.8 QP	46.0	-12.2	1.00 H	340	18.20	15.60
5	479.03	28.1 QP	46.0	-17.9	2.00 H	307	8.50	19.60
6	578.19	23.0 QP	46.0	-23.0	1.50 H	241	1.10	21.90
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	78.51	33.5 QP	40.0	-6.5	3.00 V	55	23.90	9.60
2	140.72	20.1 QP	43.5	-23.4	2.50 V	46	6.00	14.10
3	329.32	24.3 QP	46.0	-21.7	1.00 V	13	8.70	15.60
4	479.03	24.1 QP	46.0	-21.9	2.00 V	349	4.50	19.60
5	552.91	19.7 QP	46.0	-26.3	1.50 V	112	-1.70	21.40
6	725.96	22.2 QP	46.0	-23.8	2.00 V	10	-2.20	24.40

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay 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	78.51	37.9 QP	40.0	-2.1	4.00 H	127	28.30	9.60
2	142.67	27.5 QP	43.5	-16.0	2.00 H	307	13.30	14.20
3	216.00	25.1 QP	43.5	-18.4	1.00 H	292	13.90	11.20
4	321.54	33.9 QP	46.0	-12.1	1.00 H	349	18.40	15.50
5	486.81	23.7 QP	46.0	-22.3	1.50 H	274	3.90	19.80
6	552.91	24.2 QP	46.0	-21.8	1.50 H	298	2.80	21.40
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	78.51	35.0 QP	40.0	-5.0	3.00 V	211	25.40	9.60
2	142.67	19.0 QP	43.5	-24.5	3.00 V	58	4.80	14.20
3	218.50	15.2 QP	46.0	-30.8	2.00 V	202	3.90	11.30
4	325.43	23.5 QP	46.0	-22.5	1.00 V	25	7.90	15.60
5	574.30	20.4 QP	46.0	-25.6	1.00 V	73	-1.40	21.80
6	667.63	20.7 QP	46.0	-25.3	1.50 V	298	-2.90	23.60

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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 23, 2011	Nov. 22, 2012
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

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

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

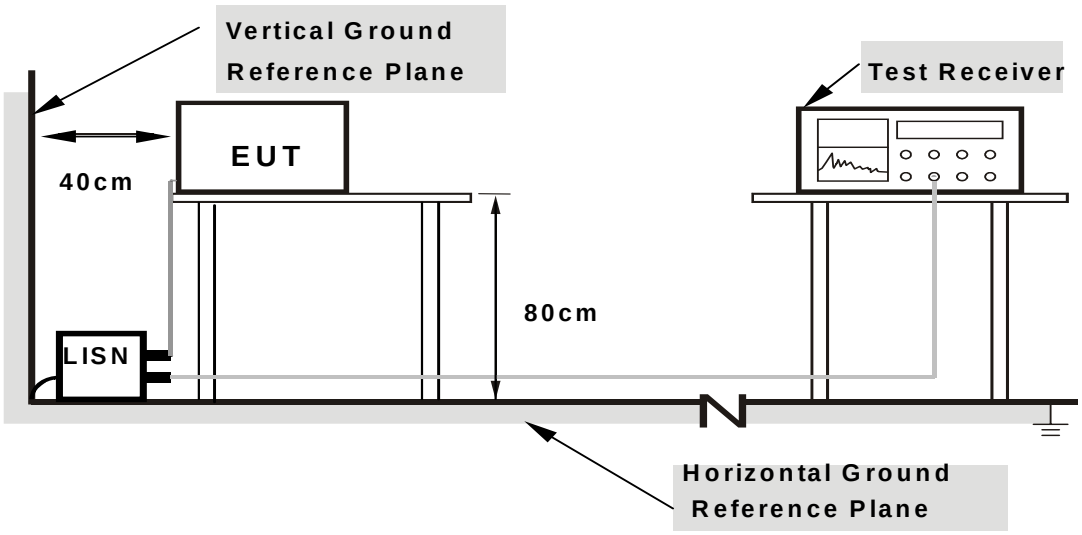
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

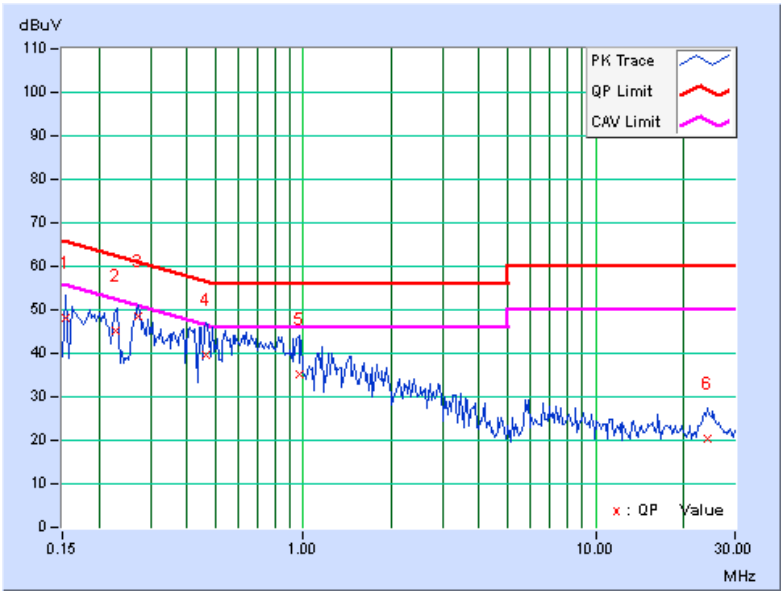
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11n (20MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 64		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.12	48.11	32.25	48.23	32.37	65.79	55.79	-17.56	-23.42
2	0.228	0.12	44.93	34.48	45.05	34.60	62.52	52.52	-17.47	-17.92
3	**0.271**	**0.12**	**48.41**	**43.50**	**48.53**	**43.62**	**61.08**	**51.08**	**-12.55**	**-7.46**
4	0.466	0.12	39.66	26.70	39.78	26.82	56.58	46.58	-16.79	-19.75
5	0.966	0.16	35.01	22.22	35.17	22.38	56.00	46.00	-20.83	-23.62
6	24.254	1.34	19.10	13.90	20.44	15.24	60.00	50.00	-39.56	-34.76

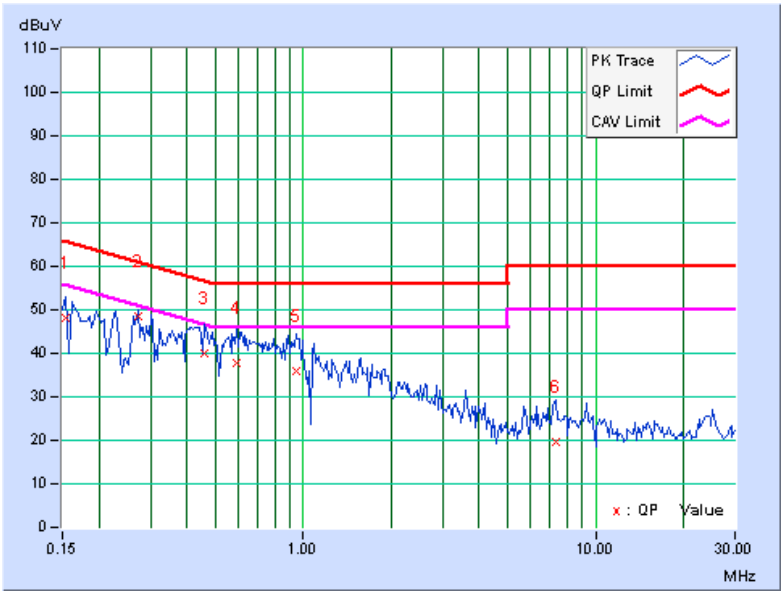
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 64		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.13	47.99	31.91	48.12	32.04	65.79	55.79	-17.67	-23.75
2	0.271	0.13	48.31	43.44	48.44	43.57	61.08	51.08	-12.64	-7.51
3	0.459	0.14	39.74	24.54	39.88	24.68	56.72	46.72	-16.83	-22.03
4	0.591	0.15	37.75	25.62	37.90	25.77	56.00	46.00	-18.10	-20.23
5	0.943	0.18	35.73	21.95	35.91	22.13	56.00	46.00	-20.09	-23.87
6	7.316	0.48	19.33	11.32	19.81	11.80	60.00	50.00	-40.19	-38.20

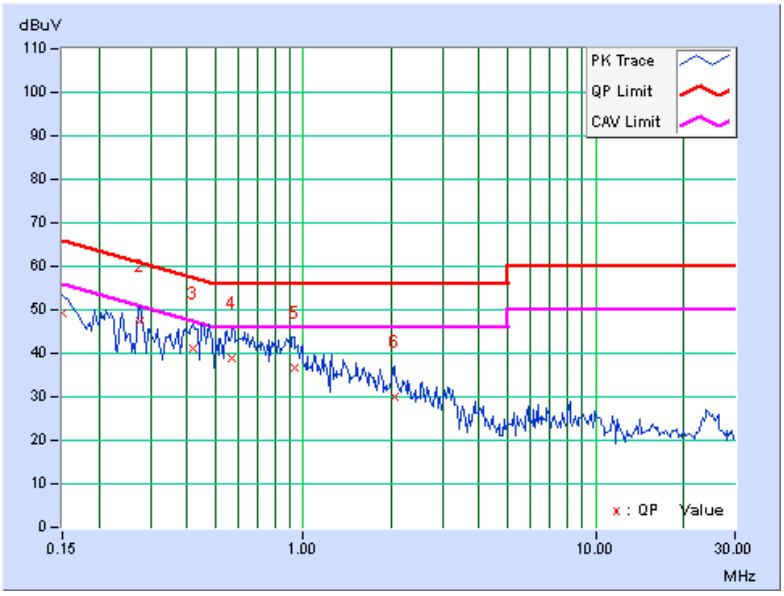
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 140		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	49.00	32.05	49.12	32.16	66.00	56.00	-16.88	-23.84
2	0.275	0.12	47.46	43.34	47.58	43.46	60.97	50.97	-13.39	-7.51
3	0.420	0.12	40.84	24.84	40.96	24.96	57.46	47.46	-16.50	-22.50
4	0.572	0.13	38.83	29.89	38.96	30.02	56.00	46.00	-17.04	-15.98
5	0.931	0.16	36.42	20.14	36.58	20.30	56.00	46.00	-19.42	-25.70
6	2.063	0.19	29.76	17.97	29.95	18.16	56.00	46.00	-26.05	-27.84

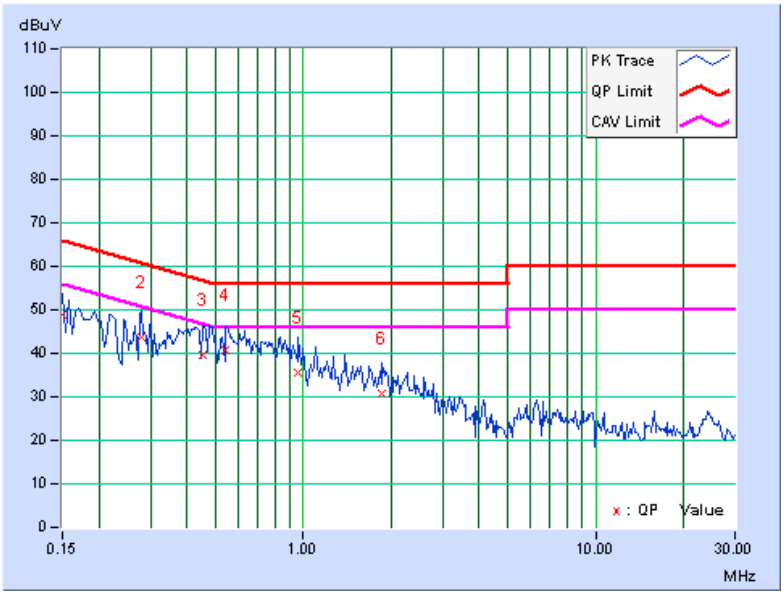
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 140		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.12	48.83	32.23	48.95	32.35	66.00	56.00	-17.05	-23.65
2	0.279	0.13	43.66	39.93	43.79	40.06	60.85	50.85	-17.05	-10.78
3	0.455	0.14	39.31	23.83	39.45	23.97	56.79	46.79	-17.34	-22.82
4	0.545	0.15	40.68	33.76	40.83	33.91	56.00	46.00	-15.17	-12.09
5	0.963	0.18	35.25	21.65	35.43	21.83	56.00	46.00	-20.57	-24.17
6	1.867	0.20	30.68	19.43	30.88	19.63	56.00	46.00	-25.12	-26.37

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.3 PEAK TRANSMIT POWER MEASUREMENT

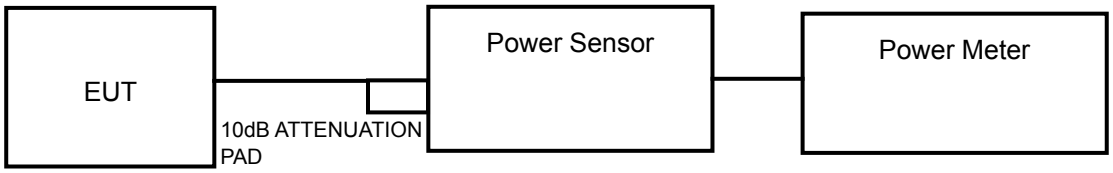
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

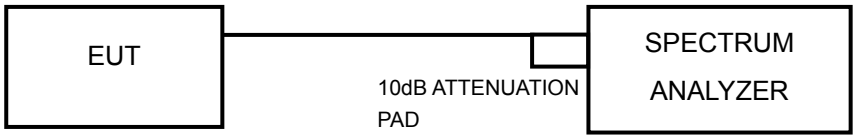
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST INSTRUMENTS

FOR POWER OUTPUT MEASUREMENT



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

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

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)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	27.5	14.4	17	PASS
40	5200	28.2	14.5	17	PASS
48	5240	26.9	14.3	17	PASS
52	5260	43.7	16.4	24	PASS
60	5300	44.7	16.5	24	PASS
64	5320	44.7	16.5	24	PASS
100	5500	58.9	17.7	24	PASS
116	5580	56.2	17.5	24	PASS
132	5660	55.0	17.4	24	PASS
140	5700	49.0	16.9	24	PASS

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	8.7	8.6	8.5	21.7	13.4	15.2	PASS
40	5200	8.6	8.6	8.5	21.6	13.3	15.2	PASS
48	5240	8.6	8.5	8.6	21.6	13.3	15.2	PASS
52	5260	15.1	15	15.2	97.1	19.9	22.2	PASS
60	5300	15	15.1	15	95.6	19.8	22.2	PASS
64	5320	15.2	15	15.1	97.1	19.9	22.2	PASS
100	5500	15.2	15	15.1	97.1	19.9	22.2	PASS
116	5580	15	15.1	15.2	97.1	19.9	22.2	PASS
132	5660	15.1	15.1	15.2	97.8	19.9	22.2	PASS
140	5700	15.2	15	15.1	97.1	19.9	22.2	PASS

Note:
5180 ~ 5240MHz: Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the conducted power limit shall be reduced to 17-(7.8-6)=15.2dBm
5260 ~ 5700MHz: Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 24-(7.8-6)=22.2dBm

802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
38	5190	10.3	10.2	10.3	31.9	15.0	15.2	PASS
46	5230	10.4	10.3	10.2	**32.2**	15.1	15.2	PASS
54	5270	15.8	16.1	15.5	114.2	20.6	22.2	PASS
62	5310	15.9	16	16	**118.5**	20.7	22.2	PASS
102	5510	16	16.2	16.3	**124.2**	20.9	22.2	PASS
110	5550	16.1	16.1	16.2	123.2	20.9	22.2	PASS
134	5670	16.1	16.1	16.1	122.2	20.9	22.2	PASS

Note:
5180 ~ 5240MHz: Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the conducted power limit shall be reduced to 17-(7.8-6)=15.2dBm
5260 ~ 5700MHz: Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 24-(7.8-6)=22.2dBm

26dB OCCUPIED BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.70	PASS
40	5200	21.31	PASS
48	5240	21.39	PASS
52	5260	25.83	PASS
60	5300	25.46	PASS
64	5320	25.38	PASS
100	5500	25.93	PASS
116	5580	27.57	PASS
132	5660	25.18	PASS
140	5700	27.60	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
36	5180	20.31	20.07	20.13	PASS
40	5200	20.06	20.13	20.16	PASS
48	5240	20.37	20.17	20.08	PASS
52	5260	27.01	22.53	24.00	PASS
60	5300	22.19	22.98	22.20	PASS
64	5320	26.95	22.41	22.52	PASS
100	5500	20.69	24.55	24.32	PASS
116	5580	24.05	20.75	23.76	PASS
132	5660	26.91	24.05	26.09	PASS
140	5700	24.26	24.26	25.41	PASS

802.11n (40MHz)

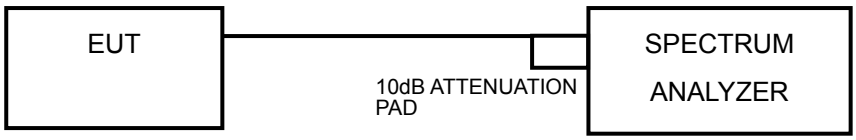
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
38	5190	42.00	41.91	41.83	PASS
46	5230	41.96	42.02	42.05	PASS
54	5270	56.41	56.70	54.10	PASS
62	5310	56.59	56.91	56.90	PASS
102	5510	57.07	56.87	58.23	PASS
110	5550	57.48	56.97	57.47	PASS
134	5670	57.43	54.29	53.89	PASS

4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB

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 PROCEDURE

1) Set RBW = 1 MHz, VBW ≤ 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.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.2.6

4.4.7 TEST RESULTS

802.11a

For 5180MHz ~ 5240MHz

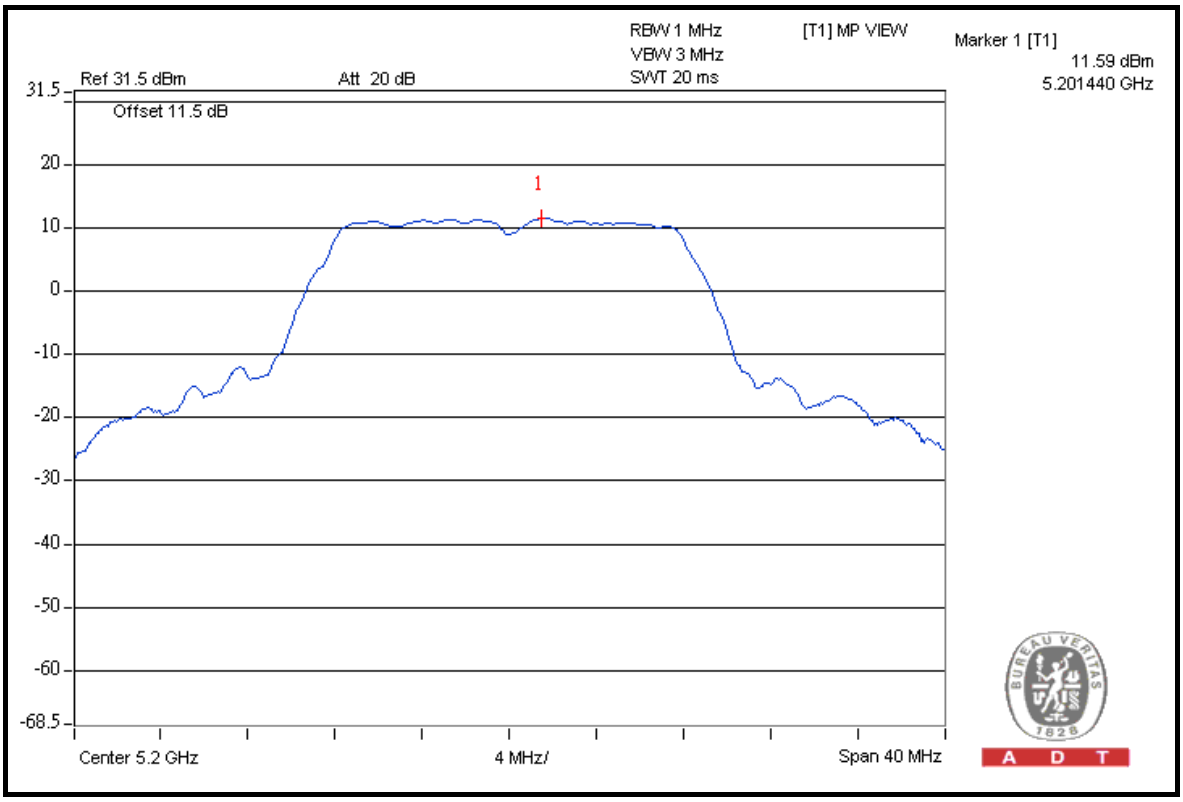
CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
36	5180	11.36	2.98	8.38	13	PASS
40	5200	11.59	2.85	8.74	13	PASS
48	5240	11.24	2.81	8.43	13	PASS

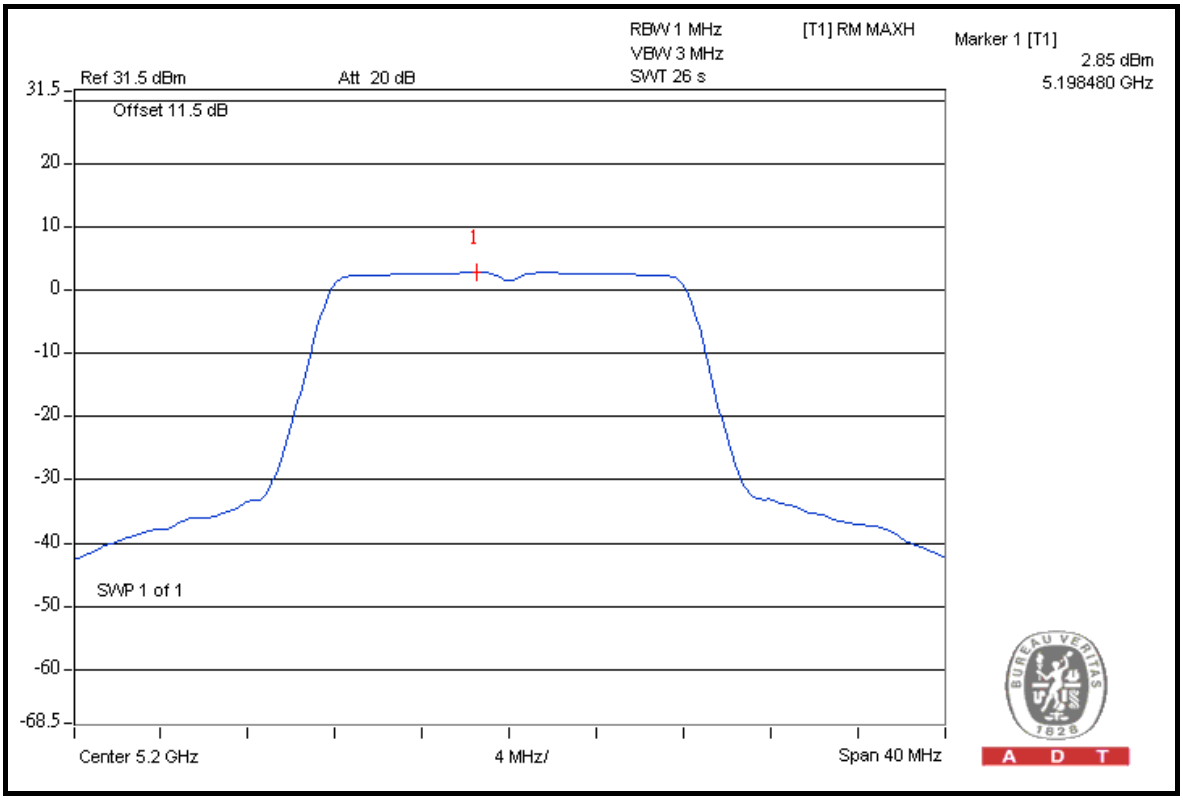
For 5260MHz ~ 5320MHz

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
52	5260	13.15	7.03	6.12	13	PASS
60	5300	13.34	6.97	6.37	13	PASS
64	5320	13.53	7.01	6.52	13	PASS

For 5500MHz ~ 5700MHz

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
100	5500	14.81	8.42	6.39	13	PASS
116	5580	14.23	8.26	5.97	13	PASS
132	5660	14.12	7.82	6.30	13	PASS
140	5700	13.96	7.55	6.41	13	PASS


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MP VIEW
Marker 1 [T1]
11.59 dBm
5.201440 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
Center 5.2 GHz
4 MHz/
Span 40 MHz


RBW 1 MHz
VBW 3 MHz
SWT 26 s
[T1] RM MAXH
Marker 1 [T1]
2.85 dBm
5.198480 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
SWP 1 of 1
Center 5.2 GHz
4 MHz/
Span 40 MHz

802.11n (20MHz)

For 5180MHz ~ 5240MHz

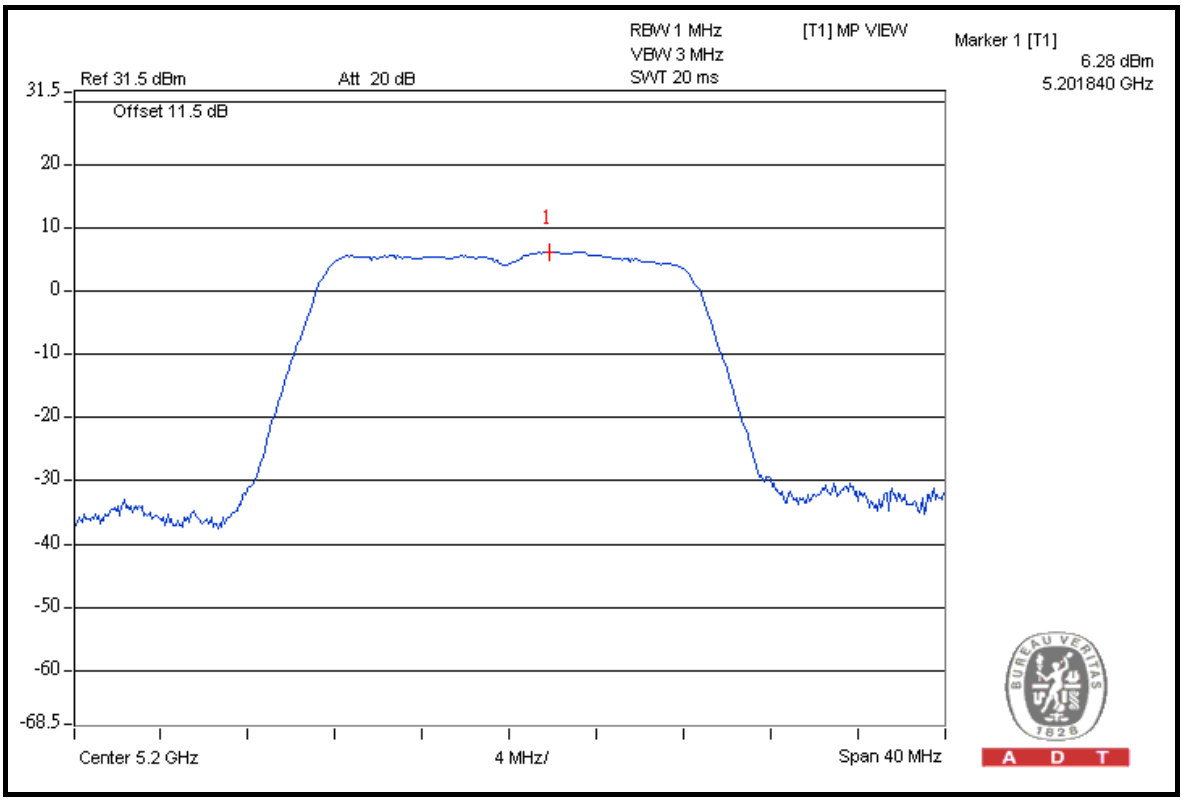
TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	36	5180	5.84	-2.66	8.50	13	PASS
	40	5200	5.94	-2.62	8.56	13	PASS
	48	5240	5.85	-2.66	8.51	13	PASS
1	36	5180	6.00	-2.77	8.77	13	PASS
	40	5200	6.09	-2.85	8.94	13	PASS
	48	5240	6.03	-2.87	8.90	13	PASS
2	36	5180	6.18	-2.69	8.87	13	PASS
	40	5200	6.28	-2.73	9.01	13	PASS
	48	5240	6.18	-2.72	8.90	13	PASS

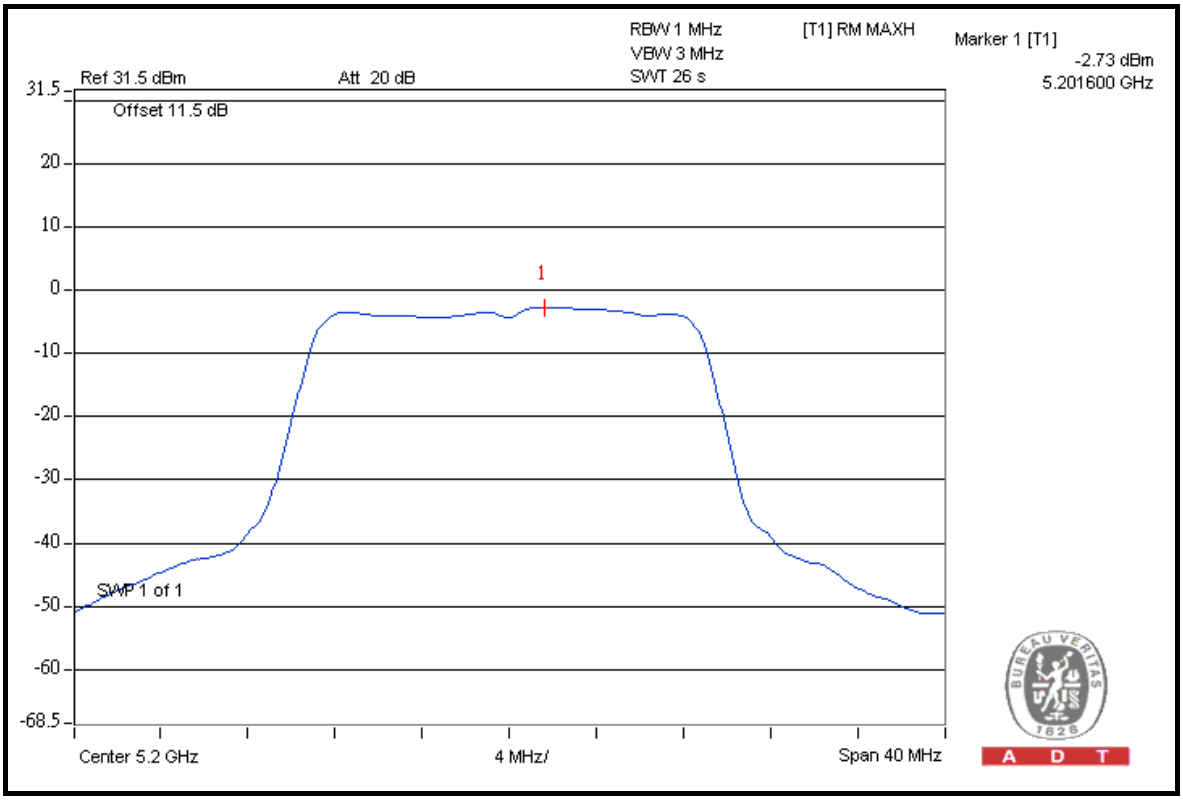
For 5260MHz ~ 5320MHz

TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	52	5260	12.13	4.16	7.97	13	PASS
	60	5300	11.96	4.09	7.87	13	PASS
	64	5320	12.39	4.06	8.33	13	PASS
1	52	5260	12.28	3.79	8.49	13	PASS
	60	5300	12.29	3.87	8.42	13	PASS
	64	5320	12.31	3.83	8.48	13	PASS
2	52	5260	12.72	4.08	8.64	13	PASS
	60	5300	12.54	3.97	8.57	13	PASS
	64	5320	12.72	4.07	8.65	13	PASS

For 5500MHz ~ 5700MHz

TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	100	5500	12.56	4.15	8.41	13	PASS
	116	5580	12.01	4.17	7.84	13	PASS
	132	5660	12.09	4.00	8.09	13	PASS
	140	5700	12.49	4.08	8.41	13	PASS
1	100	5500	12.37	3.85	8.52	13	PASS
	116	5580	12.32	3.92	8.40	13	PASS
	132	5660	12.26	3.91	8.35	13	PASS
	140	5700	12.41	3.84	8.57	13	PASS
2	100	5500	12.78	4.07	8.71	13	PASS
	116	5580	12.73	3.95	8.78	13	PASS
	132	5660	12.73	3.88	8.85	13	PASS
	140	5700	12.69	3.91	8.78	13	PASS


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MP VIEW
Marker 1 [T1]
6.28 dBm
5.201840 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
Center 5.2 GHz
4 MHz/
Span 40 MHz


RBW 1 MHz
VBW 3 MHz
SWT 26 s
[T1] RM MAXH
Marker 1 [T1]
-2.73 dBm
5.201600 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
SWP 1 of 1
Center 5.2 GHz
4 MHz/
Span 40 MHz

802.11n (40MHz)

For 5190MHz ~ 5230MHz

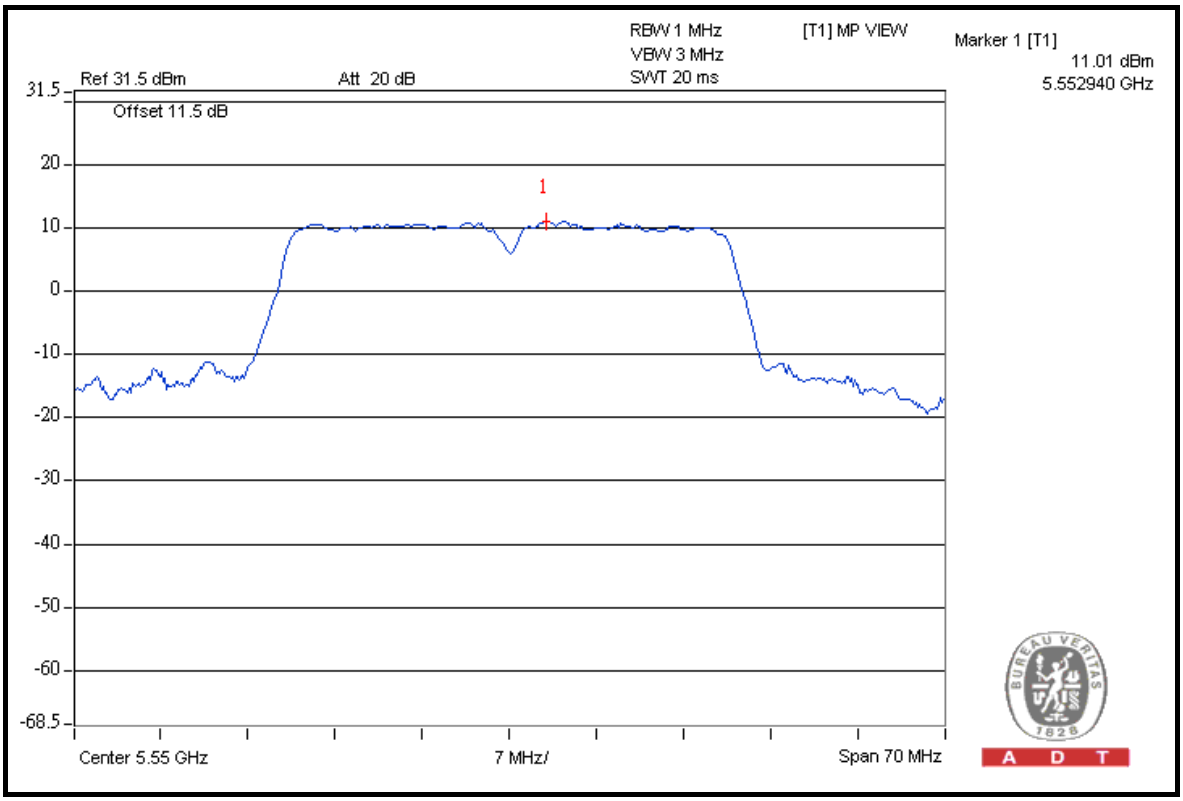
TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	38	5190	5.14	-3.44	8.58	13	PASS
	46	5230	5.24	-3.28	8.52	13	PASS
1	38	5190	5.21	-3.43	8.64	13	PASS
	46	5230	5.15	-3.39	8.54	13	PASS
2	38	5190	4.78	-3.66	8.44	13	PASS
	46	5230	4.85	-3.73	8.58	13	PASS

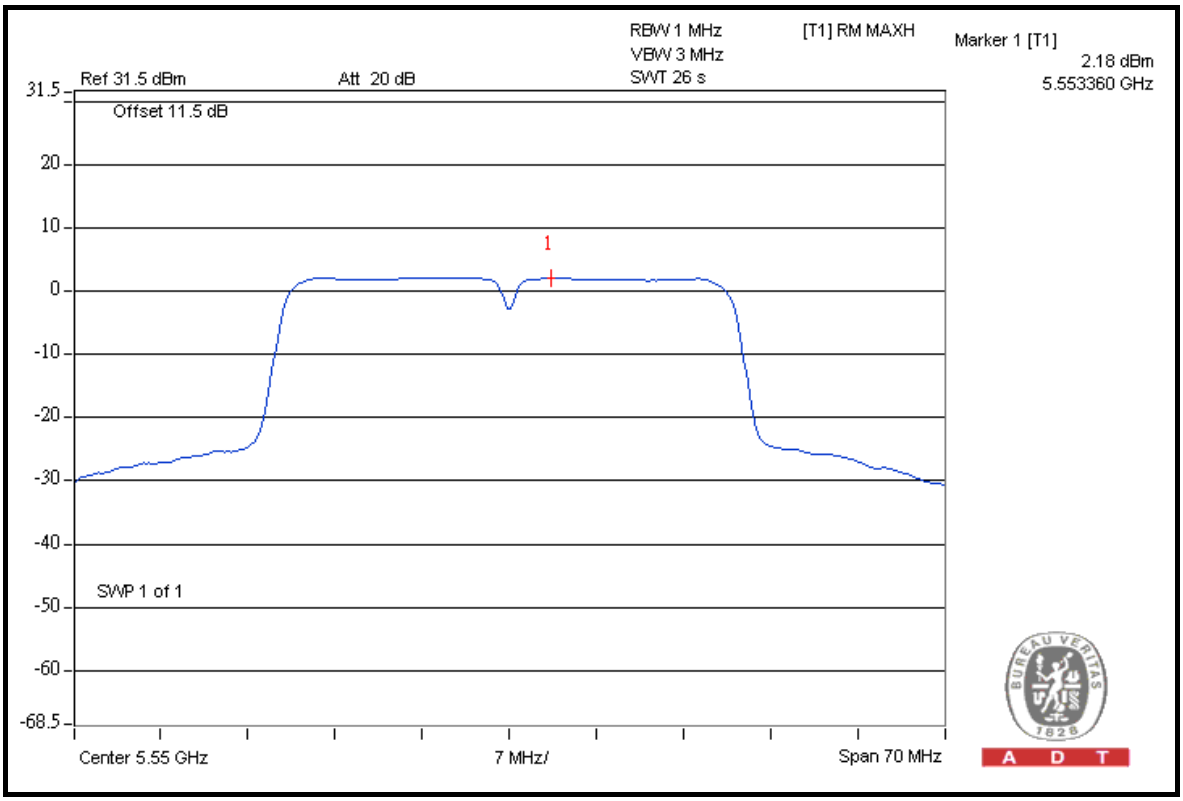
For 5270MHz ~ 5310MHz

TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	54	5270	10.53	2.08	8.45	13	PASS
	62	5310	10.74	1.96	8.78	13	PASS
1	54	5270	10.93	2.27	8.66	13	PASS
	62	5310	10.91	2.21	8.70	13	PASS
2	54	5270	10.17	1.64	8.53	13	PASS
	62	5310	10.53	1.95	8.58	13	PASS

For 5510MHz ~ 5670MHz

TX chain	CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	PEAK EXCURSION LIMIT (dB)	PASS /FAIL
0	102	5510	10.67	2.10	8.57	13	PASS
	110	5550	11.01	2.18	8.83	13	PASS
	134	5670	10.77	2.25	8.52	13	PASS
1	102	5510	11.05	2.44	8.61	13	PASS
	110	5550	10.96	2.4	8.56	13	PASS
	134	5670	10.96	2.34	8.62	13	PASS
2	102	5510	10.99	2.19	8.80	13	PASS
	110	5550	10.75	2.09	8.66	13	PASS
	134	5670	10.67	2.00	8.67	13	PASS


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MP VIEW
Marker 1 [T1]
11.01 dBm
5.552940 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
Center 5.55 GHz
7 MHz/
Span 70 MHz

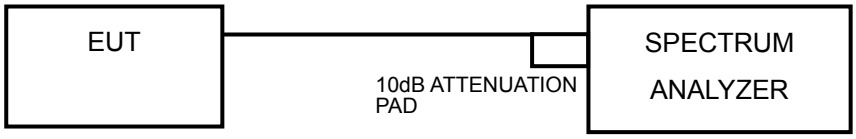

RBW 1 MHz
VBW 3 MHz
SWT 26 s
[T1] RM MAXH
Marker 1 [T1]
2.18 dBm
5.553360 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
1
SWP 1 of 1
Center 5.55 GHz
7 MHz/
Span 70 MHz

4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 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

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURES

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3) Sweep time =26 second.
4) Perform a single sweep.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

4.5.7 TEST RESULTS

802.11a

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
36	5180	2.98	4	PASS
40	5200	2.85	4	PASS
48	5240	2.81	4	PASS
52	5260	7.03	11	PASS
60	5300	6.97	11	PASS
64	5320	7.01	11	PASS
100	5500	8.42	11	PASS
116	5580	8.26	11	PASS
132	5660	7.82	11	PASS
140	5700	7.55	11	PASS

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
36	5180	-2.66	-2.77	-2.69	1.9	2.2	PASS
40	5200	-2.62	-2.85	-2.73	2.0	2.2	PASS
48	5240	-2.66	-2.87	-2.72	1.5	2.2	PASS
52	5260	4.16	3.79	4.08	8.6	9.2	PASS
60	5300	4.09	3.87	3.97	8.7	9.2	PASS
64	5320	4.06	3.83	4.07	8.7	9.2	PASS
100	5500	4.15	3.85	4.07	8.7	9.2	PASS
116	5580	4.17	3.92	3.95	8.8	9.2	PASS
132	5660	4.00	3.91	3.88	8.6	9.2	PASS
140	5700	4.08	3.84	3.91	8.5	9.2	PASS

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer
2. **5180 ~ 5240MHz:** Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 4-(7.8-6)=2.2dBm
3. **5260 ~ 5700MHz:** Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 11-(7.8-6))=9.2dBm

802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
38	5190	-3.44	-3.43	-3.66	1.2	2.2	PASS
46	5230	-3.28	-3.39	-3.73	1.1	2.2	PASS
54	5270	2.08	2.27	1.64	6.6	9.2	PASS
62	5310	1.96	2.21	1.95	6.7	9.2	PASS
102	5510	2.10	2.44	2.19	6.9	9.2	PASS
110	5550	2.18	2.40	2.09	7.0	9.2	PASS
134	5670	2.25	2.34	2.00	7.0	9.2	PASS

NOTE:

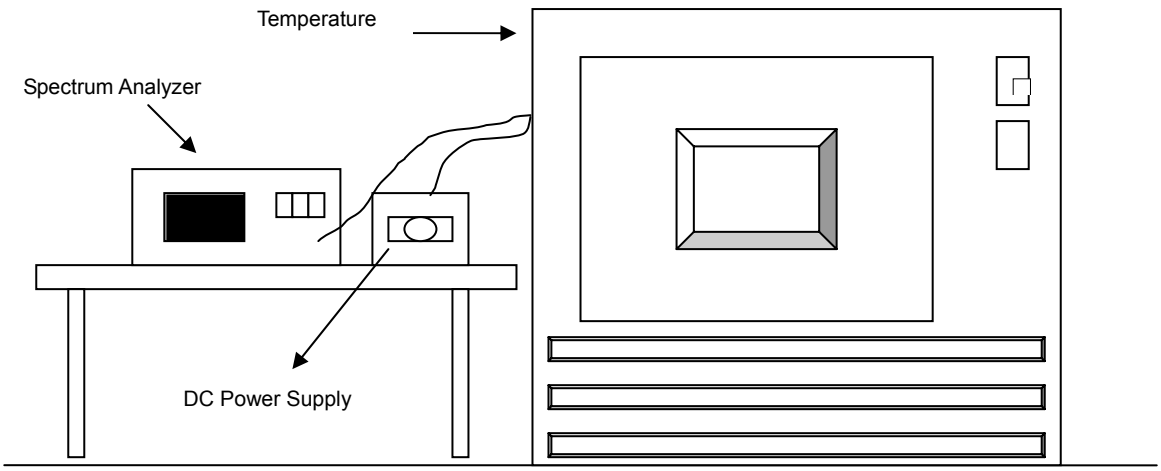
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer
2. **5180 ~ 5240MHz:** Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 4-(7.8-6)=2.2dBm
3. **5270 ~ 5670MHz:** Directional gain =3.0dBi + 10log(3)=7.8dBi > 6dBi, so the power density limit shall be reduced to 11-(7.8-6))=9.2dBm

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 DC voltage.

b. Turn the EUT on and couple its output to a spectrum analyzer.

c. Turn the EUT off and set the chamber to the highest temperature specified.

d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.

e. Repeat step 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

FREQUEMCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	110.0	5319.988009	-2.254	5319.988262	-2.206	5319.987869	-2.280	5319.987990	-2.258
40	110.0	5319.988189	-2.220	5319.988291	-2.201	5319.988368	-2.186	5319.988676	-2.129
30	110.0	5319.990114	-1.858	5319.989869	-1.904	5319.989452	-1.983	5319.989756	-1.926
20	110.0	5319.991125	-1.668	5319.991103	-1.672	5319.991401	-1.616	5319.991443	-1.608
10	110.0	5319.992769	-1.359	5319.992575	-1.396	5319.992267	-1.454	5319.992197	-1.467
0	110.0	5319.991259	-1.643	5319.991396	-1.617	5319.990910	-1.709	5319.991084	-1.676
-10	110.0	5319.989871	-1.904	5319.989289	-2.013	5319.989529	-1.968	5319.989659	-1.944
-20	110.0	5319.988798	-2.106	5319.988542	-2.154	5319.989316	-2.008	5319.989164	-2.037
-30	110.0	5319.988020	-2.252	5319.988079	-2.241	5319.988049	-2.246	5319.987797	-2.294

FREQUEMCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	93.5	5319.991709	-1.558	5319.991816	-1.538	5319.991635	-1.572	5319.991541	-1.590
	110.0	5319.991622	-1.575	5319.991561	-1.586	5319.991883	-1.526	5319.991945	-1.514
	126.5	5319.991160	-1.662	5319.990907	-1.709	5319.991381	-1.620	5319.991088	-1.675

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.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

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

Hsin Chu EMC/RF Lab
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab
Tel: 886-3-3183232
Fax: 886-3-3185050

Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

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.

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