FCC TEST REPORT (15.247)

REPORT NO.:	RF120718C09-1
MODEL NO.:	6235ANHMW
FCC ID:	QYL6235
RECEIVED:	Jul. 18, 2012
TESTED:	Aug. 10 ~ Aug. 17, 2012
ISSUED:	Oct. 26, 2012

APPLICANT:	Getac Technology Corporation
ADDRESS:	5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.

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.

This report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120718C09-1	Original release	Oct. 26, 2012

1. CERTIFICATION

PRODUCT:	WLAN/BT Module
MODEL NO.:	6235ANHMW
BRAND:	Intel
APPLICANT:	Getac Technology Corporation
TESTED:	Aug. 10 ~ Aug. 17, 2012
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)**
	ANSI C63.10-2009

The above equipment (model: 6235ANHMW) 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 : Ivonne Wu / Senior Specialist , **DATE :** Oct. 26, 2012

APPROVED BY : Ken Liu / Manager , **DATE :** Oct. 26, 2012

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	**TEST TYPE**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -9.72dB at 3.13672MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2390.00MHz and 2483.50MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	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

EUT	WLAN/BT Module
MODEL NO.	6235ANHMW
POWER SUPPLY	3.3Vdc
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	**2.4GHz:** 2412 ~ 2462MHz **5.0GHz:** 5745 ~ 5825MHz
NUMBER OF CHANNEL	**2.4GHz:** 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) **5.0GHz:** 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	249.78mW for 2412 ~ 2462MHz 222.20mW for 5745 ~ 5825MHz
ANTENNA TYPE	**2.4GHz:** PIFA Antenna with 1.9dBi gain **5.0GHz:** PIFA Antenna with 4dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Adapter

NOTE:

1. The transmitter module is authorized for use in specific End-product (Notebook PC, Brand: Getac, Model: B320).
2. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	1TX / 2TX
802.11n (40MHz)	1TX / 2TX

3. 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 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

FOR 5.0GHz (5745 ~ 5825MHz):

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

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

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

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	1TX
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11n (40MHz)	1 to 11	6	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11n (40MHz)	1 to 11	6	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0	1TX
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	3 to 9	3, 9	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	3 to 9	3, 9	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	1TX
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	30.0	2TX

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 68%RH	120Vac, 60Hz	Anderson Hong
RE<1G	25deg. C, 89%RH	120Vac, 60Hz	Anderson Hong
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
APCM	21deg. C, 65%RH	120Vac, 60Hz	Brad Wu

FOR 5.0GHz (5745 ~ 5825MHz):

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

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

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11n (20MHz)	149 to 165	157	OFDM	BPSK	14.4	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11n (20MHz)	149 to 165	157	OFDM	BPSK	14.4	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11a	149 to 165	149, 165	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	30.0	2TX

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX Function
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	1TX
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	1TX
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	14.4	2TX
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	30.0	2TX

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 68%RH	120Vac, 60Hz	Anderson Hong
RE<1G	25deg. C, 89%RH	120Vac, 60Hz	Anderson Hong
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong
APCM	21deg. C, 65%RH	120Vac, 60Hz	Brad Wu

3.3 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.

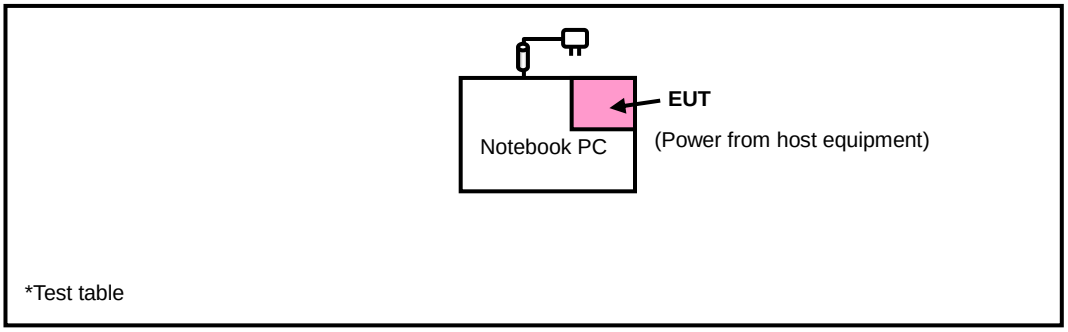
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook PC	Getac	B320	NA	NA

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 was provided by client.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C (15.247)

ANSI C63.10-2009

KDB 558074 D01 DTS Meas Guidance v01

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 (FOR 2.4GHz BAND)

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 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 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2012	Apr. 18, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 30, 2012	Jan. 29, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 03, 2012	Apr. 02, 2013
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-404	Dec. 21, 2011	Dec. 20, 2012
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	3008A01911	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10638	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 28, 2012	Aug. 27, 2013
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 11, 2012	Aug. 10, 2013
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 9.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 460141.
6. The IC Site Registration No. is IC7450F-4.

4.1.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

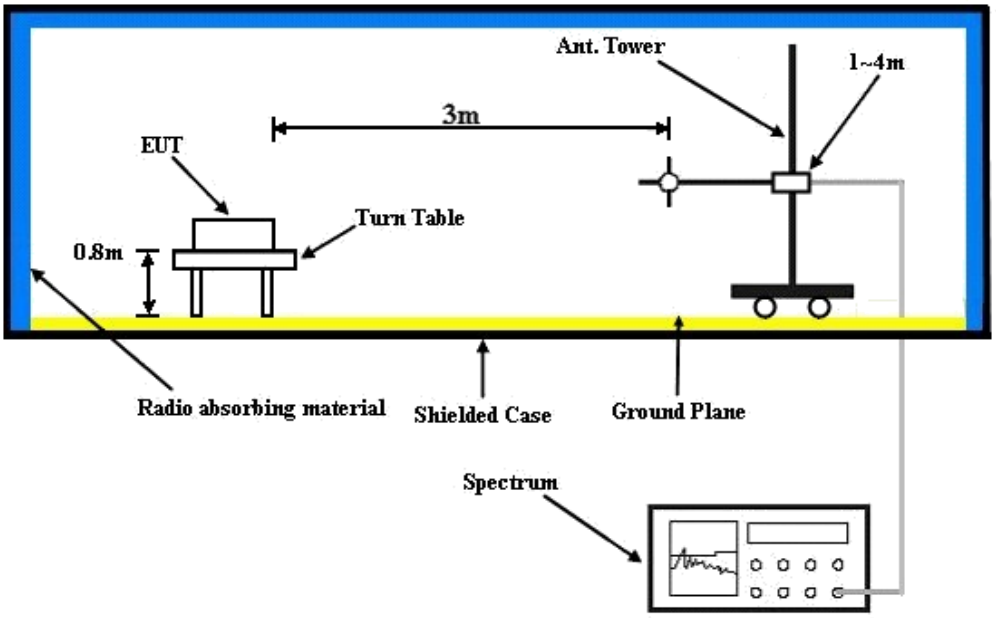
NOTE:

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 100kHz and video bandwidth is 300kHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

a. Placed the EUT on a testing table.

b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

ABOVE 1GHz DATA:

802.11b: 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	61.1 PK	74.0	-12.9	1.46 H	129	29.70	31.40
2	2390.00	52.3 AV	54.0	-1.7	1.46 H	129	20.90	31.40
3	*2412.00	105.7 PK			1.46 H	129	74.30	31.40
4	*2412.00	101.5 AV			1.46 H	129	70.10	31.40
5	4824.00	46.8 PK	74.0	-27.2	1.00 H	118	9.30	37.50
6	4824.00	38.9 AV	54.0	-15.1	1.00 H	118	1.40	37.50
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	2390.00	56.5 PK	74.0	-17.5	1.00 V	172	25.10	31.40
2	2390.00	48.0 AV	54.0	-6.0	1.00 V	172	16.60	31.40
3	*2412.00	99.7 PK			1.00 V	172	68.30	31.40
4	*2412.00	95.5 AV			1.00 V	172	64.10	31.40
5	4824.00	51.9 PK	74.0	-22.1	1.00 V	213	14.40	37.50
6	4824.00	48.6 AV	54.0	-5.4	1.00 V	213	11.10	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2437.00	106.1 PK			1.65 H	123	74.60	31.50
2	*2437.00	101.8 AV			1.65 H	123	70.30	31.50
3	4874.00	47.8 PK	74.0	-26.2	1.22 H	123	10.20	37.60
4	4874.00	42.0 AV	54.0	-12.0	1.22 H	123	4.40	37.60
5	7311.00	51.0 PK	74.0	-23.0	1.32 H	15	7.30	43.70
6	7311.00	40.4 AV	54.0	-13.6	1.32 H	15	-3.30	43.70
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	*2437.00	100.0 PK			1.04 V	165	68.50	31.50
2	*2437.00	95.7 AV			1.04 V	165	64.20	31.50
3	4874.00	54.4 PK	74.0	-19.6	1.07 V	253	16.80	37.60
4	4874.00	51.7 AV	54.0	-2.3	1.07 V	253	14.10	37.60
5	7311.00	50.7 PK	74.0	-23.3	1.04 V	307	7.00	43.70
6	7311.00	40.0 AV	54.0	-14.0	1.04 V	307	-3.70	43.70

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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2462.00	105.6 PK			1.67 H	123	74.00	31.60
2	*2462.00	101.3 AV			1.67 H	123	69.70	31.60
3	2483.50	60.4 PK	74.0	-13.6	1.67 H	123	28.70	31.70
4	2483.50	52.4 AV	54.0	-1.6	1.67 H	123	20.70	31.70
5	4924.00	47.6 PK	74.0	-26.4	1.05 H	127	9.90	37.70
6	4924.00	39.4 AV	54.0	-14.6	1.05 H	127	1.70	37.70
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	*2462.00	101.4 PK			1.00 V	208	69.80	31.60
2	*2462.00	97.2 AV			1.00 V	208	65.60	31.60
3	2483.50	57.0 PK	74.0	-17.0	1.00 V	208	25.30	31.70
4	2483.50	48.9 AV	54.0	-5.1	1.00 V	208	17.20	31.70
5	4924.00	55.6 PK	74.0	-18.4	1.04 V	256	17.90	37.70
6	4924.00	52.8 AV	54.0	-1.2	1.04 V	256	15.10	37.70

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.

802.11g: 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	71.5 PK	74.0	-2.5	1.00 H	314	40.10	31.40
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 H**	**314**	**21.60**	**31.40**
3	*2412.00	104.3 PK			1.00 H	314	72.90	31.40
4	*2412.00	94.1 AV			1.00 H	314	62.70	31.40
5	4824.00	45.4 PK	74.0	-28.6	1.00 H	83	7.90	37.50
6	4824.00	32.2 AV	54.0	-21.8	1.00 H	83	-5.30	37.50
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	2390.00	67.1 PK	74.0	-6.9	1.00 V	29	35.70	31.40
2	2390.00	50.1 AV	54.0	-3.9	1.00 V	29	18.70	31.40
3	*2412.00	100.1 PK			1.00 V	29	68.70	31.40
4	*2412.00	89.7 AV			1.00 V	29	58.30	31.40
5	4824.00	51.0 PK	74.0	-23.0	1.00 V	51	13.50	37.50
6	4824.00	35.7 AV	54.0	-18.3	1.00 V	51	-1.80	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2437.00	105.9 PK			1.46 H	304	74.40	31.50
2	*2437.00	95.5 AV			1.46 H	304	64.00	31.50
3	4874.00	47.5 PK	74.0	-26.5	1.00 H	86	9.90	37.60
4	4874.00	34.6 AV	54.0	-19.4	1.00 H	86	-3.00	37.60
5	7311.00	51.3 PK	74.0	-22.7	1.05 H	21	7.60	43.70
6	7311.00	38.3 AV	54.0	-15.7	1.05 H	21	-5.40	43.70
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	*2437.00	102.3 PK			1.00 V	31	70.80	31.50
2	*2437.00	92.1 AV			1.00 V	31	60.60	31.50
3	4874.00	53.3 PK	74.0	-20.7	1.00 V	46	15.70	37.60
4	4874.00	39.1 AV	54.0	-14.9	1.00 V	46	1.50	37.60
5	7311.00	50.7 PK	74.0	-23.3	1.28 V	351	7.00	43.70
6	7311.00	38.2 AV	54.0	-15.8	1.28 V	351	-5.50	43.70

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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2462.00	104.0 PK			1.46 H	308	72.40	31.60
2	*2462.00	93.9 AV			1.46 H	308	62.30	31.60
3	2483.50	69.7 PK	74.0	-4.3	1.46 H	308	38.00	31.70
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.46 H**	**308**	**21.30**	**31.70**
5	4924.00	45.7 PK	74.0	-28.3	1.00 H	88	8.00	37.70
6	4924.00	32.5 AV	54.0	-21.5	1.00 H	88	-5.20	37.70
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	*2462.00	99.9 PK			1.00 V	33	68.30	31.60
2	*2462.00	89.6 AV			1.00 V	33	58.00	31.60
3	2483.50	66.2 PK	74.0	-7.8	1.00 V	33	34.50	31.70
4	2483.50	50.6 AV	54.0	-3.4	1.00 V	33	18.90	31.70
5	4924.00	51.3 PK	74.0	-22.7	1.00 V	55	13.60	37.70
6	4924.00	36.0 AV	54.0	-18.0	1.00 V	55	-1.70	37.70

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.

802.11n (20MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	**2390.00**	**73.0 PK**	**74.0**	**-1.0**	**1.00 H**	**132**	**41.60**	**31.40**
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 H**	**132**	**21.60**	**31.40**
3	*2412.00	104.4 PK			1.00 H	132	73.00	31.40
4	*2412.00	94.1 AV			1.00 H	132	62.70	31.40
5	4824.00	45.1 PK	74.0	-28.9	1.00 H	83	7.60	37.50
6	4824.00	32.1 AV	54.0	-21.9	1.00 H	83	-5.40	37.50
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	2390.00	64.7 PK	74.0	-9.3	1.46 V	182	33.30	31.40
2	2390.00	48.1 AV	54.0	-5.9	1.46 V	182	16.70	31.40
3	*2412.00	98.9 PK			1.46 V	182	67.50	31.40
4	*2412.00	88.4 AV			1.46 V	182	57.00	31.40
5	4824.00	48.2 PK	74.0	-25.8	1.00 V	196	10.70	37.50
6	4824.00	33.3 AV	54.0	-20.7	1.00 V	196	-4.20	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2437.00	106.8 PK			1.00 H	129	75.30	31.50
2	*2437.00	96.5 AV			1.00 H	129	65.00	31.50
3	4874.00	48.0 PK	74.0	-26.0	1.00 H	151	10.40	37.60
4	4874.00	33.2 AV	54.0	-20.8	1.00 H	151	-4.40	37.60
5	7311.00	51.3 PK	74.0	-22.7	1.40 H	283	7.60	43.70
6	7311.00	38.1 AV	54.0	-15.9	1.40 H	283	-5.60	43.70
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	*2437.00	101.7 PK			1.42 V	180	70.20	31.50
2	*2437.00	91.1 AV			1.42 V	180	59.60	31.50
3	4874.00	54.9 PK	74.0	-19.1	1.08 V	212	17.30	37.60
4	4874.00	39.5 AV	54.0	-14.5	1.08 V	212	1.90	37.60
5	7311.00	51.6 PK	74.0	-22.4	1.20 V	214	7.90	43.70
6	7311.00	38.2 AV	54.0	-15.8	1.20 V	214	-5.50	43.70

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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2462.00	104.1 PK			1.42 H	124	72.50	31.60
2	*2462.00	93.6 AV			1.42 H	124	62.00	31.60
3	2483.50	68.7 PK	74.0	-5.3	1.42 H	124	37.00	31.70
4	2483.50	52.6 AV	54.0	-1.4	1.42 H	124	20.90	31.70
5	4924.00	45.4 PK	74.0	-28.6	1.00 H	88	7.70	37.70
6	4924.00	32.4 AV	54.0	-21.6	1.00 H	88	-5.30	37.70
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	*2462.00	97.9 PK			1.18 V	176	66.30	31.60
2	*2462.00	87.4 AV			1.18 V	176	55.80	31.60
3	2483.50	64.0 PK	74.0	-10.0	1.18 V	176	32.30	31.70
4	2483.50	48.7 AV	54.0	-5.3	1.18 V	176	17.00	31.70
5	4924.00	48.5 PK	74.0	-25.5	1.00 V	192	10.80	37.70
6	4924.00	33.7 AV	54.0	-20.3	1.00 V	192	-4.00	37.70

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.

802.11n (40MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	70.6 PK	74.0	-3.4	1.00 H	132	39.20	31.40
2	**2390.00**	**53.0 AV**	**54.0**	**-1.0**	**1.00 H**	**132**	**21.60**	**31.40**
3	*2422.00	97.8 PK			1.00 H	132	66.30	31.50
4	*2422.00	87.1 AV			1.00 H	132	55.60	31.50
5	4844.00	44.7 PK	74.0	-29.3	1.00 H	84	7.20	37.50
6	4844.00	31.8 AV	54.0	-22.2	1.00 H	84	-5.70	37.50
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	2390.00	62.4 PK	74.0	-11.6	1.44 V	181	31.00	31.40
2	2390.00	48.2 AV	54.0	-5.8	1.44 V	181	16.80	31.40
3	*2422.00	92.8 PK			1.44 V	181	61.30	31.50
4	*2422.00	82.1 AV			1.44 V	181	50.60	31.50
5	4844.00	47.9 PK	74.0	-26.1	1.00 V	191	10.40	37.50
6	4844.00	33.0 AV	54.0	-21.0	1.00 V	191	-4.50	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	62.3 PK	74.0	-11.7	1.00 H	131	30.90	31.40
2	2390.00	47.6 AV	54.0	-6.4	1.00 H	131	16.20	31.40
3	*2437.00	99.3 PK			1.00 H	131	67.80	31.50
4	*2437.00	88.9 AV			1.00 H	131	57.40	31.50
5	2483.50	62.3 PK	74.0	-11.7	1.00 H	131	30.60	31.70
6	2483.50	47.7 AV	54.0	-6.3	1.00 H	131	16.00	31.70
7	4874.00	45.9 PK	74.0	-28.1	1.00 H	86	8.30	37.60
8	4874.00	33.2 AV	54.0	-20.8	1.00 H	86	-4.40	37.60
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	2390.00	55.9 PK	74.0	-18.1	1.43 V	183	24.50	31.40
2	2390.00	44.7 AV	54.0	-9.3	1.43 V	183	13.30	31.40
3	*2437.00	94.1 PK			1.43 V	183	62.60	31.50
4	*2437.00	83.7 AV			1.43 V	183	52.20	31.50
5	2483.50	58.8 PK	74.0	-15.2	1.43 V	183	27.10	31.70
6	2483.50	45.8 AV	54.0	-8.2	1.43 V	183	14.10	31.70
7	4874.00	49.2 PK	74.0	-24.8	1.00 V	196	11.60	37.60
8	4874.00	34.2 AV	54.0	-19.8	1.00 V	196	-3.40	37.60

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2452.00	96.9 PK			1.00 H	131	65.30	31.60
2	*2452.00	86.2 AV			1.00 H	131	54.60	31.60
3	2483.50	65.6 PK	74.0	-8.4	1.00 H	131	33.90	31.70
4	2483.50	51.6 AV	54.0	-2.4	1.00 H	131	19.90	31.70
5	4904.00	44.4 PK	74.0	-29.6	1.00 H	81	6.80	37.60
6	4904.00	31.6 AV	54.0	-22.4	1.00 H	81	-6.00	37.60
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	*2452.00	90.9 PK			1.43 V	179	59.30	31.60
2	*2452.00	80.6 AV			1.43 V	179	49.00	31.60
3	2483.50	59.7 PK	74.0	-14.3	1.43 V	179	28.00	31.70
4	2483.50	48.4 AV	54.0	-5.6	1.43 V	179	16.70	31.70
5	4904.00	47.7 PK	74.0	-26.3	1.00 V	199	10.10	37.60
6	4904.00	32.8 AV	54.0	-21.2	1.00 V	199	-4.80	37.60

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.
5. " * ": Fundamental frequency.

802.11n (20MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	67.8 PK	74.0	-6.2	1.27 H	120	36.40	31.40
2	2390.00	52.7 AV	54.0	-1.3	1.27 H	120	21.30	31.40
3	*2412.00	105.5 PK			1.25 H	123	74.10	31.40
4	*2412.00	93.2 AV			1.25 H	123	61.80	31.40
5	4824.00	44.6 PK	74.0	-29.4	1.00 H	80	7.10	37.50
6	4824.00	31.9 AV	54.0	-22.1	1.00 H	80	-5.60	37.50
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	2390.00	65.0 PK	74.0	-9.0	1.00 V	219	33.60	31.40
2	2390.00	50.3 AV	54.0	-3.7	1.00 V	219	18.90	31.40
3	*2412.00	102.9 PK			1.00 V	219	71.50	31.40
4	*2412.00	90.3 AV			1.00 V	219	58.90	31.40
5	4824.00	47.1 PK	74.0	-26.9	1.45 V	6	9.60	37.50
6	4824.00	33.5 AV	54.0	-20.5	1.45 V	6	-4.00	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2437.00	108.1 PK			1.23 H	121	76.60	31.50
2	*2437.00	95.5 AV			1.23 H	121	64.00	31.50
3	4874.00	51.5 PK	74.0	-22.5	1.33 H	254	13.90	37.60
4	4874.00	35.7 AV	54.0	-18.3	1.33 H	254	-1.90	37.60
5	7311.00	50.3 PK	74.0	-23.7	1.20 H	231	6.60	43.70
6	7311.00	38.0 AV	54.0	-16.0	1.20 H	231	-5.70	43.70
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	*2437.00	105.5 PK			1.00 V	216	74.00	31.50
2	*2437.00	92.9 AV			1.00 V	216	61.40	31.50
3	4874.00	54.6 PK	74.0	-19.4	1.02 V	248	17.00	37.60
4	4874.00	38.1 AV	54.0	-15.9	1.02 V	248	0.50	37.60
5	7311.00	50.7 PK	74.0	-23.3	1.35 V	312	7.00	43.70
6	7311.00	37.9 AV	54.0	-16.1	1.35 V	312	-5.80	43.70

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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2462.00	105.1 PK			1.23 H	159	73.50	31.60
2	*2462.00	92.6 AV			1.23 H	159	61.00	31.60
3	2483.50	68.0 PK	74.0	-6.0	1.23 H	159	36.30	31.70
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.23 H**	**159**	**21.30**	**31.70**
5	4924.00	44.2 PK	74.0	-29.8	1.00 H	83	6.50	37.70
6	4924.00	31.5 AV	54.0	-22.5	1.00 H	83	-6.20	37.70
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	*2462.00	101.8 PK			1.00 V	210	70.20	31.60
2	*2462.00	89.4 AV			1.00 V	210	57.80	31.60
3	2483.50	64.0 PK	74.0	-10.0	1.00 V	210	32.30	31.70
4	2483.50	50.6 AV	54.0	-3.4	1.00 V	210	18.90	31.70
5	4924.00	46.8 PK	74.0	-27.2	1.42 V	9	9.10	37.70
6	4924.00	33.2 AV	54.0	-20.8	1.42 V	9	-4.50	37.70

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.

802.11n (40MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	70.2 PK	74.0	-3.8	1.27 H	120	38.80	31.40
2	2390.00	52.8 AV	54.0	-1.2	1.27 H	120	21.40	31.40
3	*2422.00	98.0 PK			1.27 H	120	66.50	31.50
4	*2422.00	87.6 AV			1.27 H	120	56.10	31.50
5	4844.00	44.1 PK	74.0	-29.9	1.00 H	86	6.60	37.50
6	4844.00	31.4 AV	54.0	-22.6	1.00 H	86	-6.10	37.50
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	2390.00	65.6 PK	74.0	-8.4	1.00 V	218	34.20	31.40
2	2390.00	48.4 AV	54.0	-5.6	1.00 V	218	17.00	31.40
3	*2422.00	95.1 PK			1.00 V	218	63.60	31.50
4	*2422.00	84.8 AV			1.00 V	218	53.30	31.50
5	4844.00	44.0 PK	74.0	-30.0	1.20 V	240	6.50	37.50
6	4844.00	31.5 AV	54.0	-22.5	1.20 V	240	-6.00	37.50

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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	2390.00	62.8 PK	74.0	-11.2	1.25 H	120	31.40	31.40
2	2390.00	50.3 AV	54.0	-3.7	1.25 H	120	18.90	31.40
3	*2437.00	101.9 PK			1.25 H	120	70.40	31.50
4	*2437.00	91.4 AV			1.25 H	120	59.90	31.50
5	2483.50	65.1 PK	74.0	-8.9	1.25 H	120	33.40	31.70
6	2483.50	52.5 AV	54.0	-1.5	1.25 H	120	20.80	31.70
7	4874.00	46.5 PK	74.0	-27.5	1.00 H	82	8.90	37.60
8	4874.00	33.7 AV	54.0	-20.3	1.00 H	82	-3.90	37.60
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	2390.00	60.2 PK	74.0	-13.8	1.00 V	214	28.80	31.40
2	2390.00	47.6 AV	54.0	-6.4	1.00 V	214	16.20	31.40
3	*2437.00	99.3 PK			1.00 V	214	67.80	31.50
4	*2437.00	89.0 AV			1.00 V	214	57.50	31.50
5	2483.50	62.2 PK	74.0	-11.8	1.00 V	214	30.50	31.70
6	2483.50	49.4 AV	54.0	-4.6	1.00 V	214	17.70	31.70
7	4874.00	46.3 PK	74.0	-27.7	1.24 V	243	8.70	37.60
8	4874.00	33.8 AV	54.0	-20.2	1.24 V	243	-3.80	37.60

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 9	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*2452.00	97.8 PK			1.23 H	119	66.20	31.60
2	*2452.00	87.4 AV			1.23 H	119	55.80	31.60
3	2483.50	68.4 PK	74.0	-5.6	1.23 H	119	36.70	31.70
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.23 H**	**119**	**21.30**	**31.70**
5	4904.00	43.8 PK	74.0	-30.2	1.00 H	84	6.20	37.60
6	4904.00	31.2 AV	54.0	-22.8	1.00 H	84	-6.40	37.60
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	*2452.00	95.5 PK			1.00 V	212	63.90	31.60
2	*2452.00	85.1 AV			1.00 V	212	53.50	31.60
3	2483.50	65.1 PK	74.0	-8.9	1.00 V	212	33.40	31.70
4	2483.50	50.1 AV	54.0	-3.9	1.00 V	212	18.40	31.70
5	4904.00	43.7 PK	74.0	-30.3	1.23 V	241	6.10	37.60
6	4904.00	31.2 AV	54.0	-22.8	1.23 V	241	-6.40	37.60

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.
5. " * ": Fundamental frequency.

BELOW 1GHz WORST-CASE DATA：

802.11n (40MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	43.58	23.6 QP	40.0	-16.4	1.50 H	197	9.80	13.80
2	165.80	23.1 QP	43.5	-20.4	1.50 H	281	9.40	13.70
3	289.96	28.6 QP	46.0	-17.4	1.00 H	105	14.10	14.50
4	480.08	33.0 QP	46.0	-13.0	1.50 H	269	13.40	19.60
5	544.10	26.6 QP	46.0	-19.4	1.00 H	175	5.50	21.10
6	720.64	33.6 QP	46.0	-12.4	1.00 H	232	10.30	23.30
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	30.00	36.7 QP	40.0	-3.3	1.00 V	223	24.80	11.90
2	146.40	29.7 QP	43.5	-13.8	1.00 V	44	15.90	13.80
3	189.08	28.7 QP	43.5	-14.8	1.00 V	4	16.70	12.00
4	388.90	30.2 QP	46.0	-15.8	1.25 V	343	13.00	17.20
5	480.08	33.7 QP	46.0	-12.3	1.00 V	335	14.10	19.60
6	720.64	30.5 QP	46.0	-15.5	1.00 V	313	7.20	23.30

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 (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. 29, 2011	Dec. 28, 2012
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 02, 2012	Jul. 01, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 07, 2012	Feb. 06, 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 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.

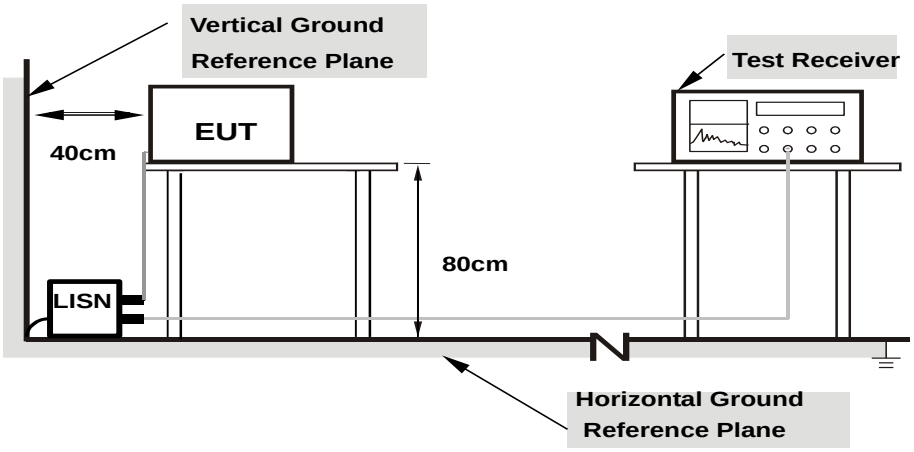
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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：

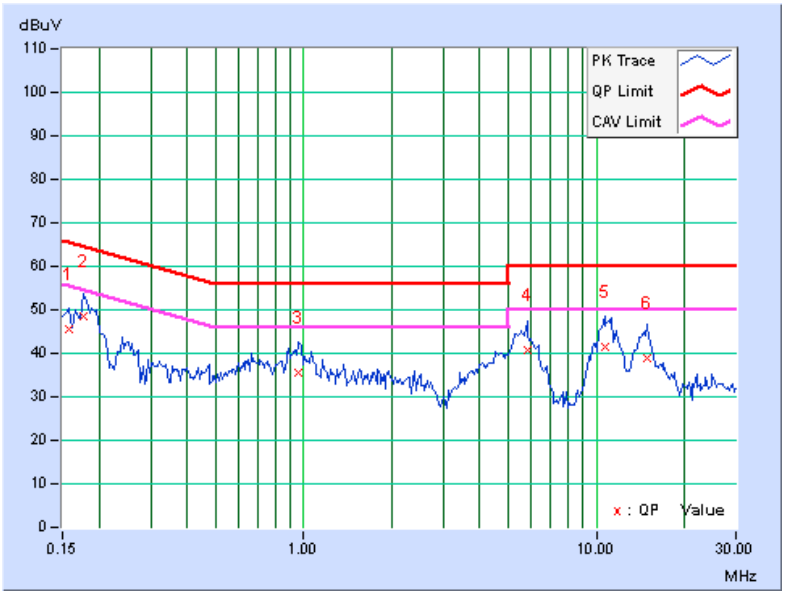
802.11n (40MHz): 2TX

PHASE	Line 1	6dB BANDWIDTH	9kHz

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	0.15781	0.12	45.48	31.28	45.60	31.40	65.58	55.58	-19.98	-24.18
2	0.17734	0.12	48.25	33.36	48.37	33.48	64.61	54.61	-16.24	-21.13
3	0.95859	0.19	35.42	25.25	35.61	25.44	56.00	46.00	-20.39	-20.56
4	5.79297	0.43	40.15	29.53	40.58	29.96	60.00	50.00	-19.42	-20.04
5	10.65625	0.67	40.83	34.47	41.50	35.14	60.00	50.00	-18.50	-14.86
6	14.93359	0.90	37.98	30.96	38.88	31.86	60.00	50.00	-21.12	-18.14

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.

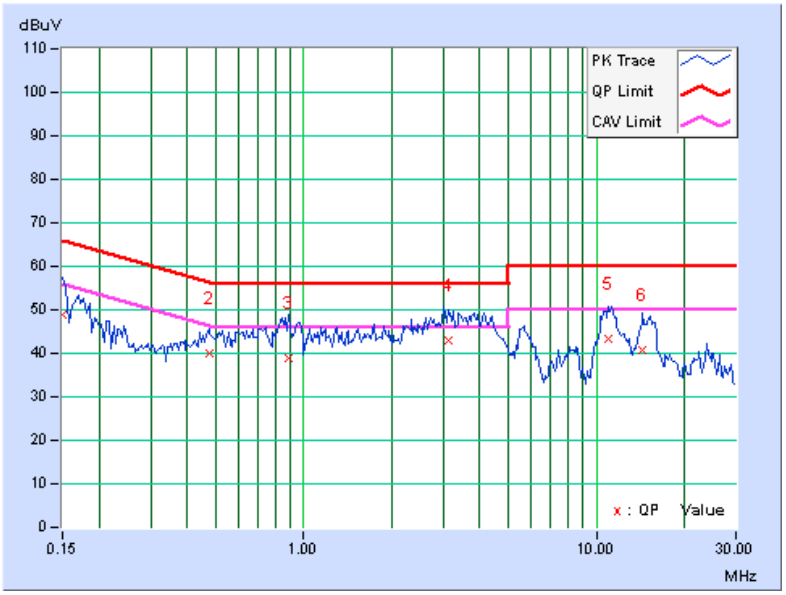


PHASE	Line 2	6dB BANDWIDTH	9kHz

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	0.15000	0.12	48.89	32.19	49.01	32.31	66.00	56.00	-16.99	-23.69
2	0.47422	0.16	39.85	27.87	40.01	28.03	56.44	46.44	-16.43	-18.41
3	0.88828	0.20	38.74	28.59	38.94	28.79	56.00	46.00	-17.06	-17.21
4	**3.13672**	**0.30**	**42.80**	**35.98**	**43.10**	**36.28**	**56.00**	**46.00**	**-12.90**	**-9.72**
5	10.98438	0.63	42.72	36.93	43.35	37.56	60.00	50.00	-16.65	-12.44
6	14.31250	0.75	39.89	34.19	40.64	34.94	60.00	50.00	-19.36	-15.06

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.

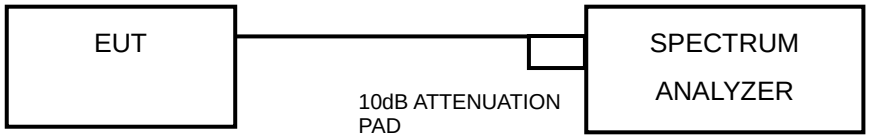


4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURE

a. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.31	0.5	PASS
6	2437	10.31	0.5	PASS
11	2462	10.30	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	15.86	0.5	PASS
6	2437	15.94	0.5	PASS
11	2462	15.92	0.5	PASS

802.11n (20MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.31	0.5	PASS
6	2437	17.38	0.5	PASS
11	2462	17.40	0.5	PASS

802.11n (40MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
3	2422	36.07	0.5	PASS
6	2437	36.01	0.5	PASS
9	2452	36.04	0.5	PASS

802.11n (20MHz): 2TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.51	17.37	0.5	PASS
6	2437	17.17	17.63	0.5	PASS
11	2462	17.34	17.52	0.5	PASS

802.11n (40MHz): 2TX

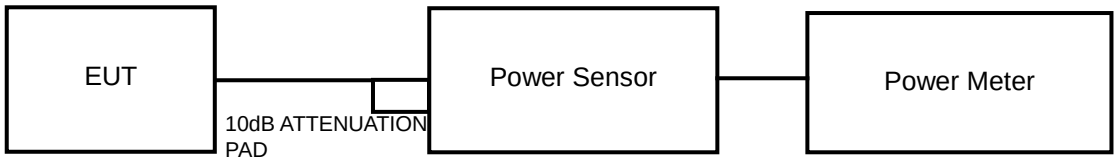
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	35.85	35.72	0.5	PASS
6	2437	36.08	36.00	0.5	PASS
9	2452	36.01	36.07	0.5	PASS

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

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

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b: 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	89.54	19.52	30	PASS
6	2437	60.67	17.83	30	PASS
11	2462	76.21	18.82	30	PASS

802.11g: 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	126.47	21.02	30	PASS
6	2437	165.58	22.19	30	PASS
11	2462	112.72	20.52	30	PASS

802.11n (20MHz): 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	100.46	20.02	30	PASS
6	2437	164.82	22.17	30	PASS
11	2462	100.93	20.04	30	PASS

802.11n (40MHz): 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
3	2422	51.64	17.13	30	PASS
6	2437	105.20	20.22	30	PASS
9	2452	62.09	17.93	30	PASS

802.11n (20MHz): 2TX

CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	20.00	19.56	190.36	22.80	30	PASS
6	2437	20.83	20.80	241.29	23.83	30	PASS
11	2462	19.46	19.16	170.72	22.32	30	PASS

802.11n (40MHz): 2TX

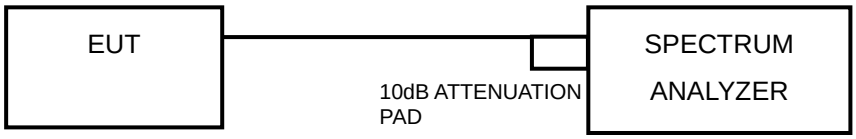
CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	2422	19.34	19.56	176.27	22.46	30	PASS
6	2437	21.01	20.92	249.78	23.98	30	PASS
9	2452	19.59	19.34	176.89	22.48	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

a. Set the RBW = 100 kHz, VBW =300 kHz, Detector = peak.
b. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
c. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
d. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(3 kHz/100kHz)

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b: 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	7.87	-7.36	8	PASS
6	2437	6.22	-9.01	8	PASS
11	2462	6.96	-8.27	8	PASS

802.11g: 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.65	-11.58	8	PASS
6	2437	4.72	-10.51	8	PASS
11	2462	3.22	-12.01	8	PASS

802.11n (20MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	2.49	-12.74	8	PASS
6	2437	4.55	-10.68	8	PASS
11	2462	2.33	-12.90	8	PASS

802.11n (40MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
3	2422	-3.99	-19.22	8	PASS
6	2437	-0.91	-16.14	8	PASS
9	2452	-3.10	-18.33	8	PASS

802.11n (20MHz): 2TX

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	3.11	-12.12	3.01	-9.11	8	PASS
	6	2437	4.18	-11.05	3.01	-8.04	8	PASS
	11	2462	2.45	-12.78	3.01	-9.77	8	PASS
1	1	2412	1.80	-13.43	3.01	-10.42	8	PASS
	6	2437	4.05	-11.18	3.01	-8.17	8	PASS
	11	2462	1.47	-13.76	3.01	-10.75	8	PASS

802.11n (40MHz): 2TX

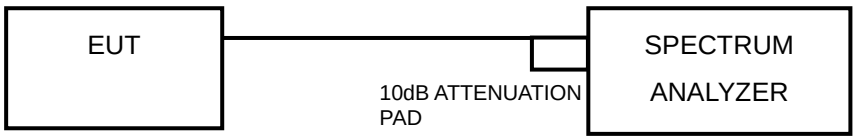
TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	3	2422	-2.00	-17.23	3.01	-14.22	8	PASS
	6	2437	-0.06	-15.29	3.01	-12.28	8	PASS
	9	2452	-1.91	-17.14	3.01	-14.13	8	PASS
1	3	2422	-1.41	-16.64	3.01	-13.63	8	PASS
	6	2437	0.58	-14.65	3.01	-11.64	8	PASS
	9	2452	-1.81	-17.04	3.01	-14.03	8	PASS

4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.7 TEST RESULTS

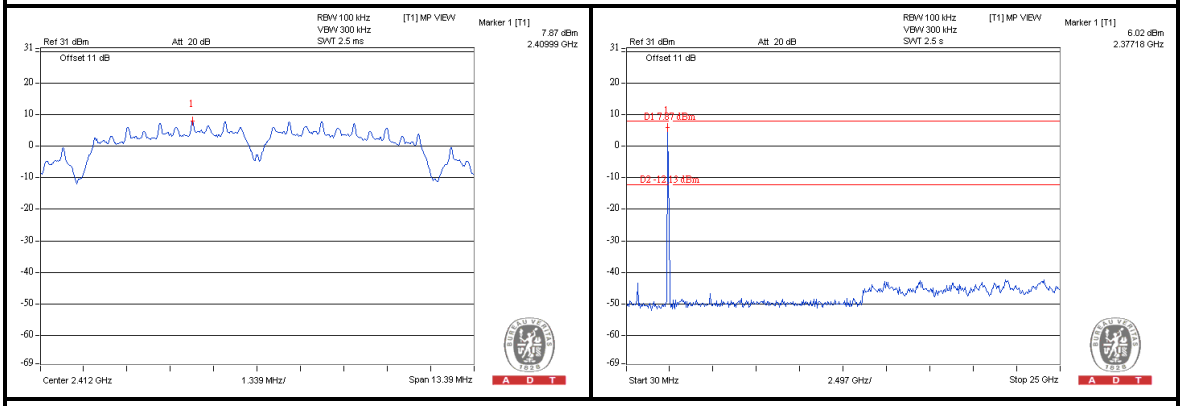
The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit. Only worst data of each operating mode is presented.

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

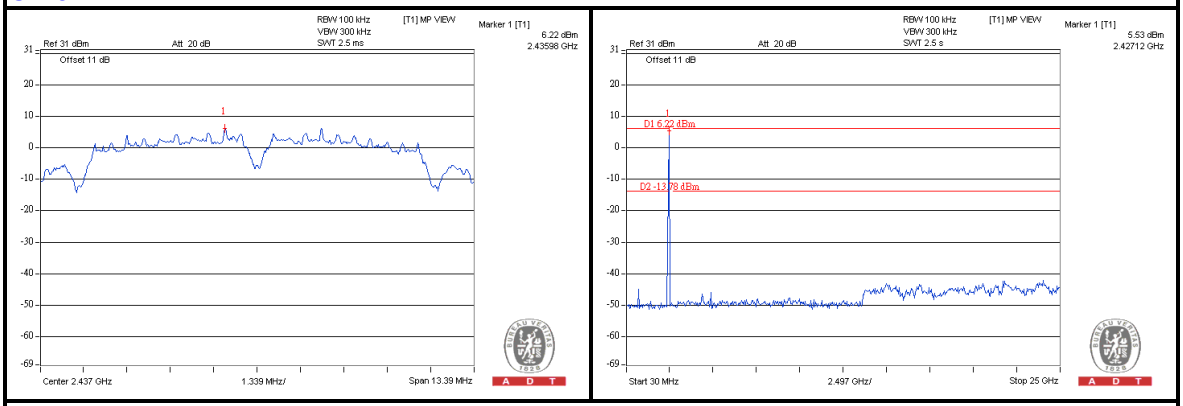
4.6.8 TEST RESULTS

802.11b: 1TX

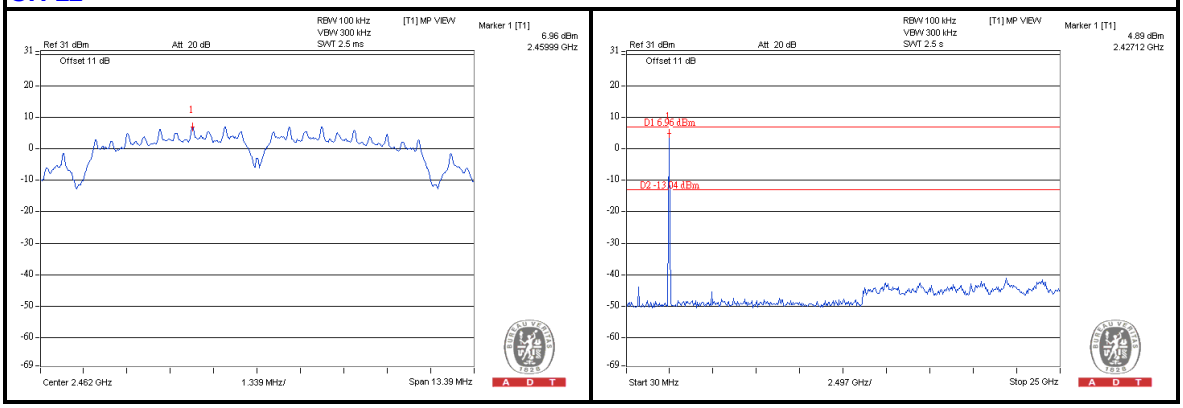
CH 1



CH 6

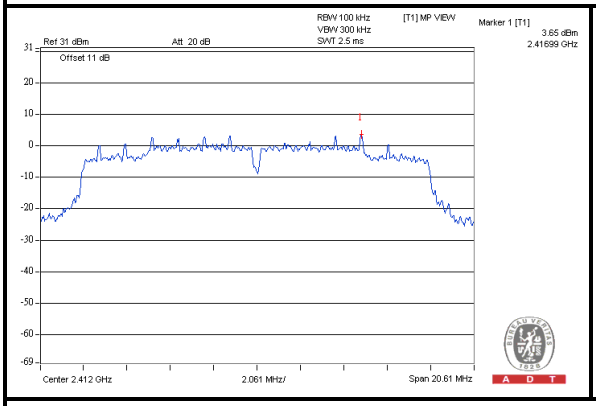


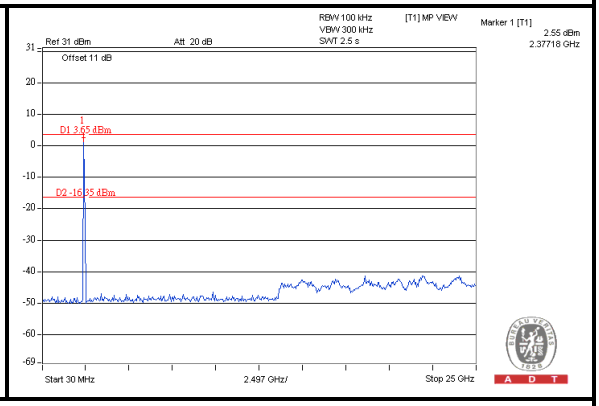
CH 11



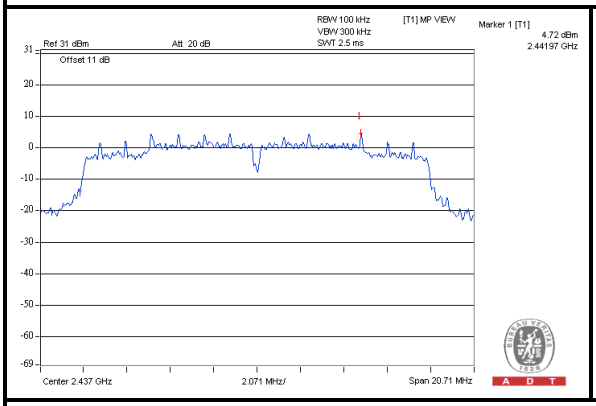
802.11g: 1TX

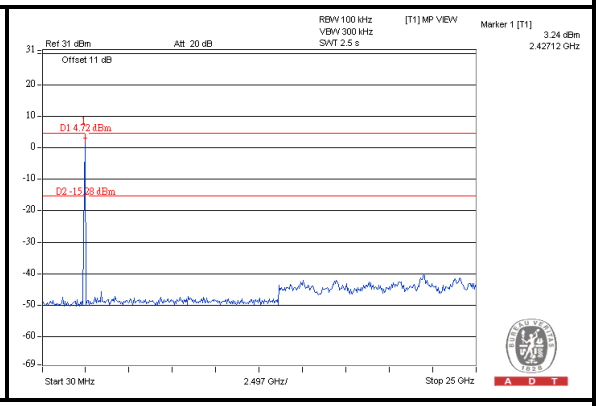
CH 1



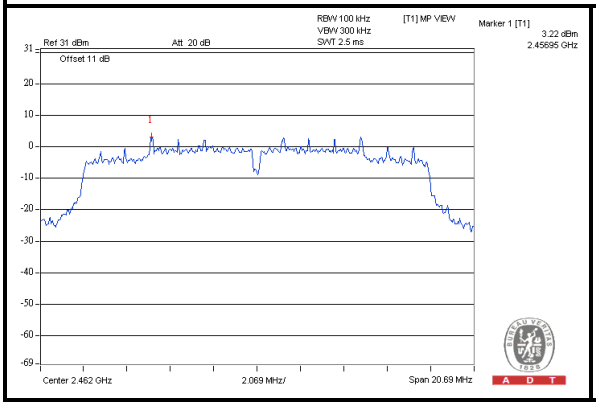


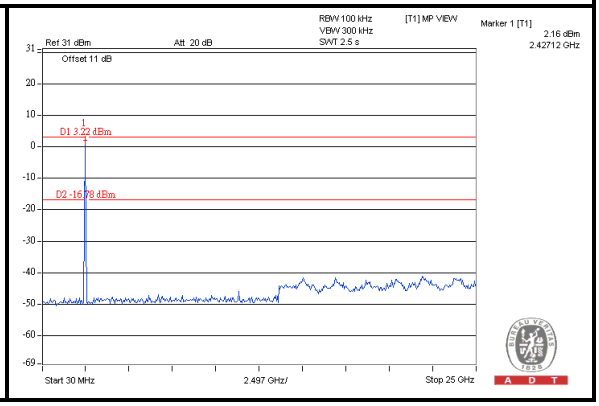
CH 6





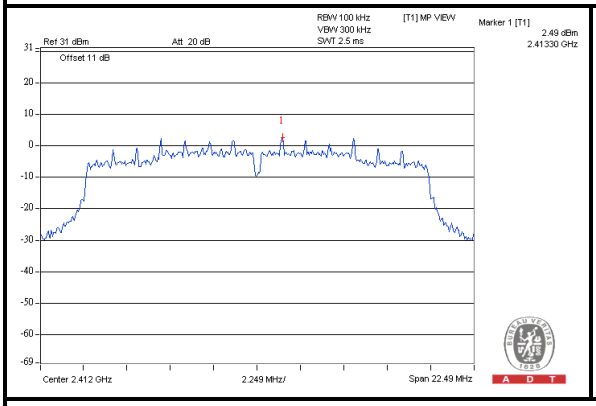
CH 11

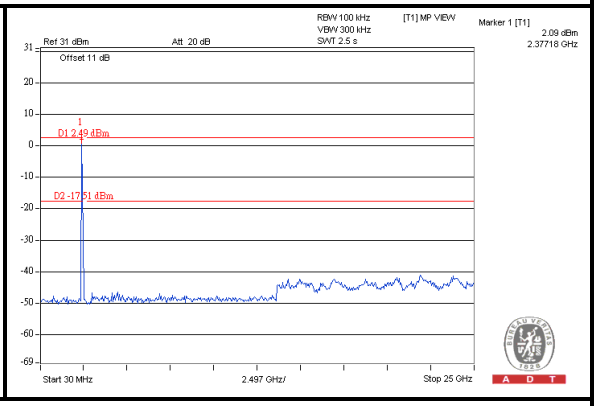




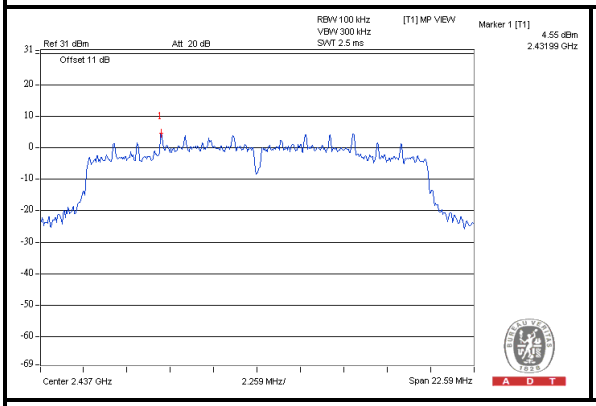
802.11n (20MHz): 1TX

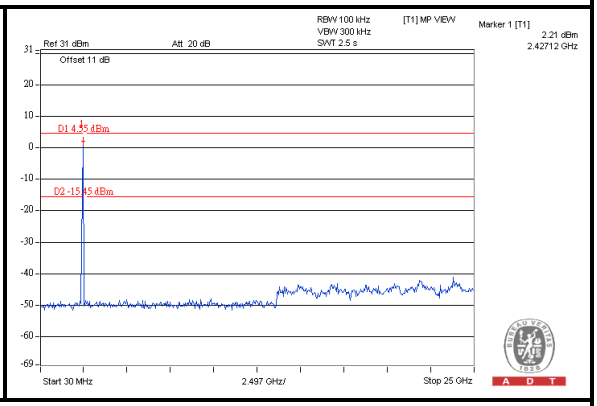
CH 1



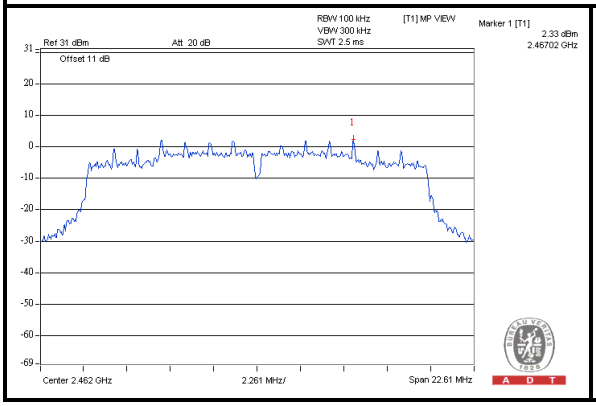


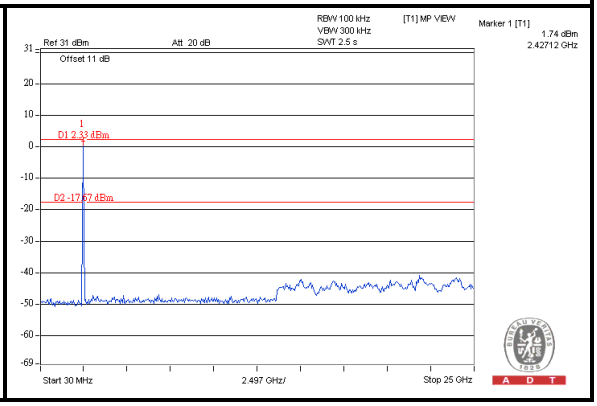
CH 6





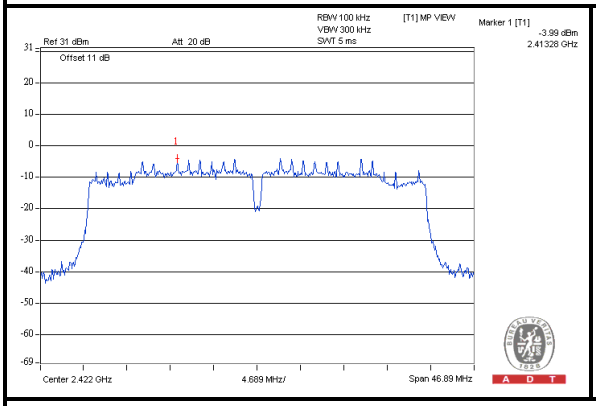
CH 11

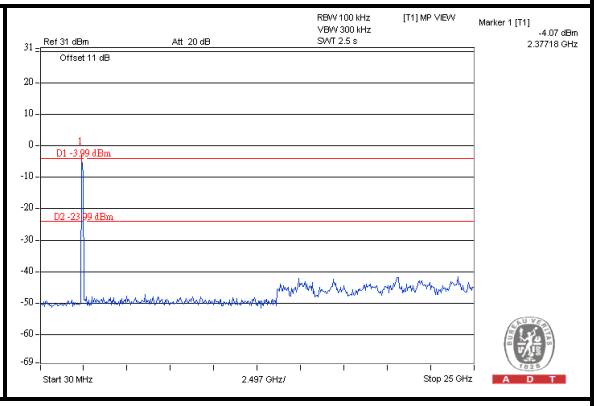




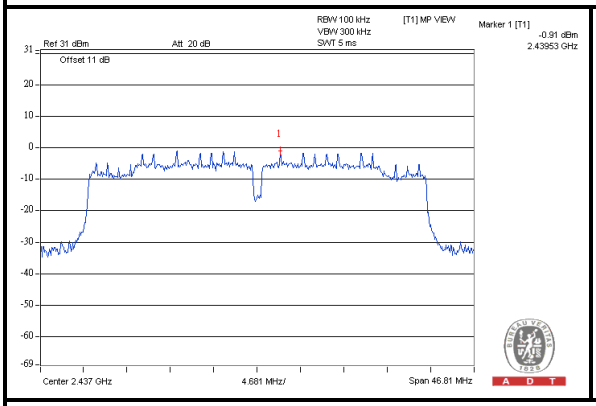
802.11n (40MHz): 1TX

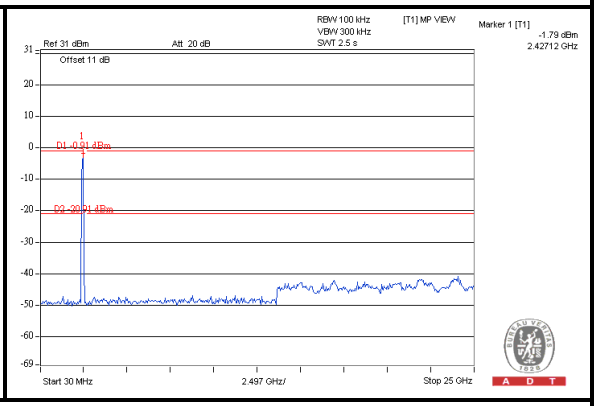
CH 3



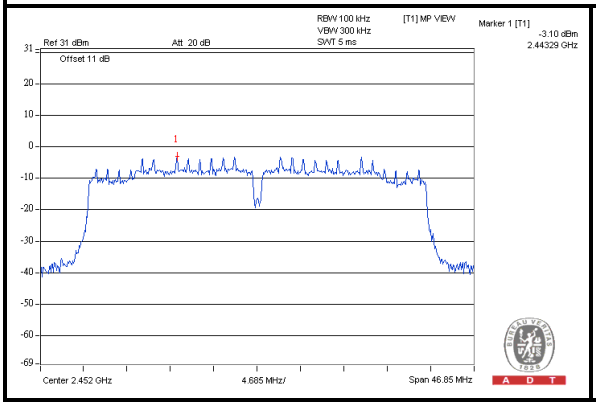


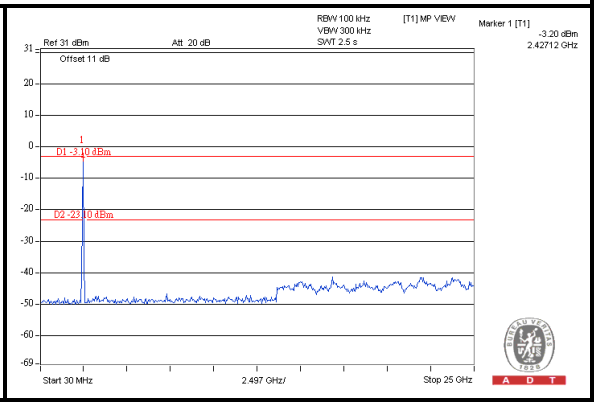
CH 6





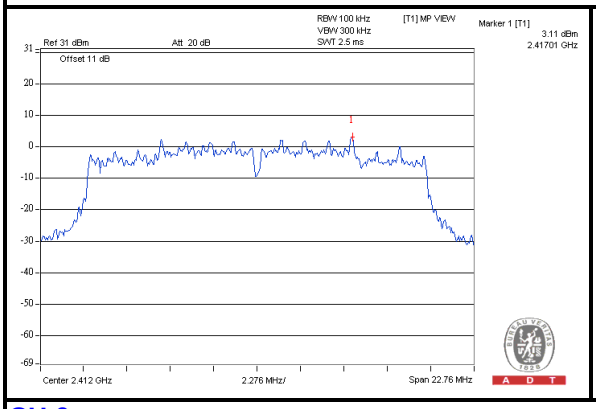
CH 9

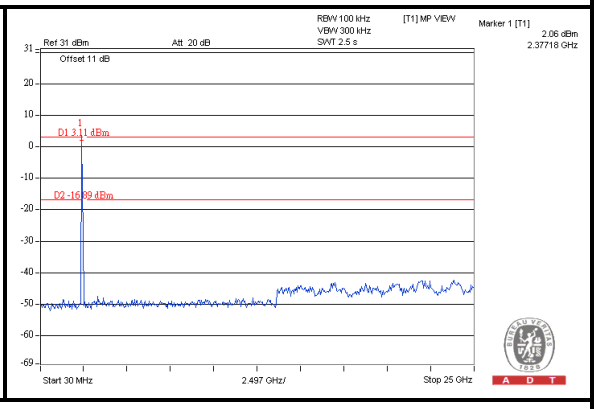




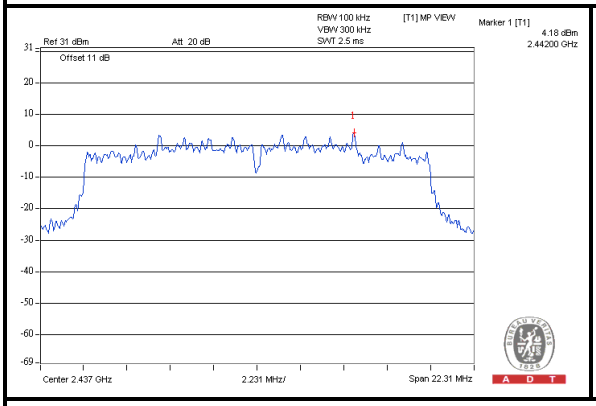
802.11n (20MHz): 2TX

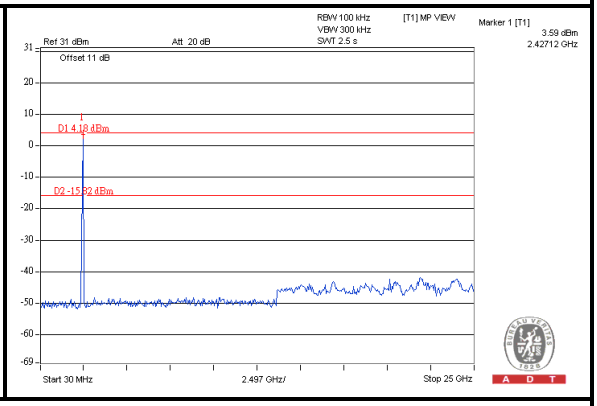
CH 1



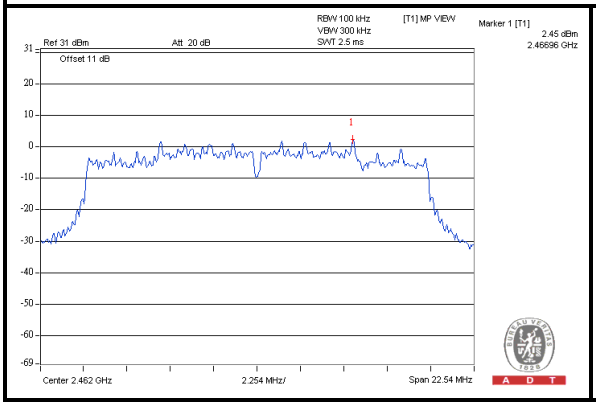


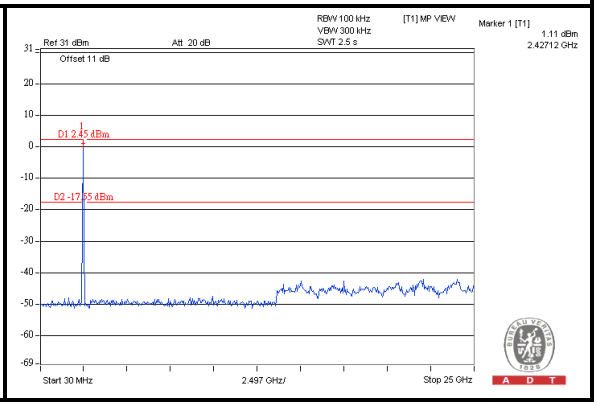
CH 6





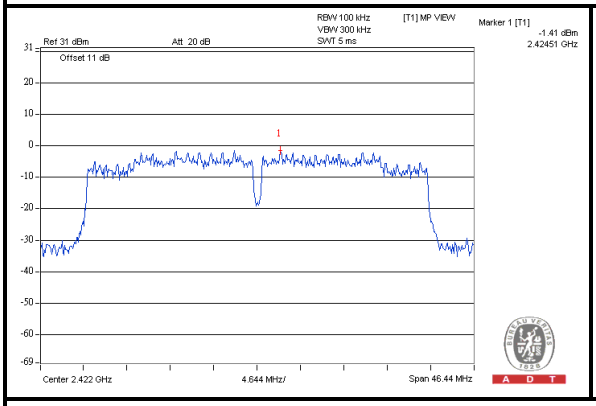
CH 11

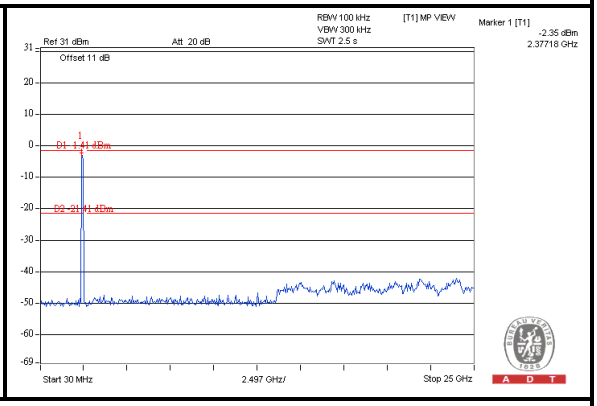




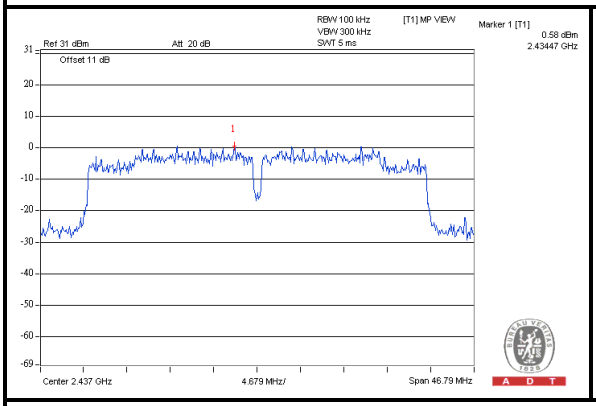
802.11n (40MHz): 2TX

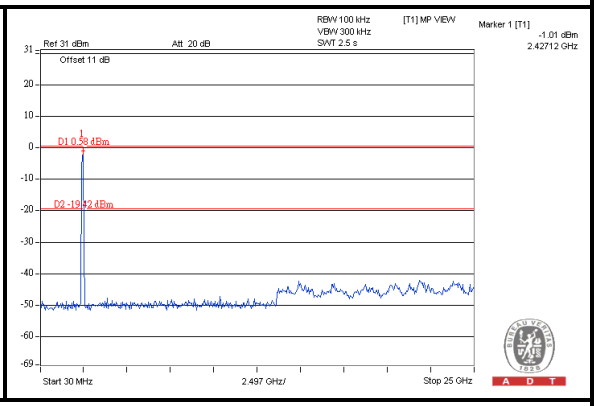
CH 3



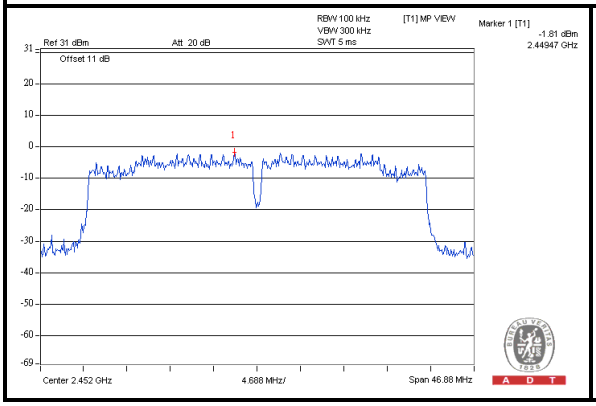


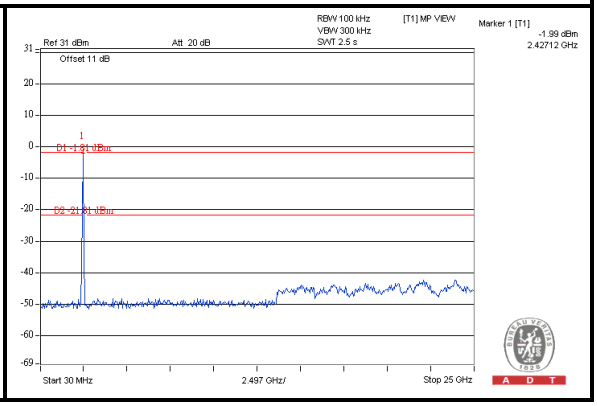
CH 6





CH 9





5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 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.

5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

5.1.3 TEST PROCEDURES

Same as item 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as item 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.1.7 TEST RESULTS

ABOVE 1GHz DATA:

802.11a: 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	**TESTED BY**	Anderson Hong

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	#5725.00	79.7 PK	85.1	-5.4	1.04 H	300	40.50	39.20
2	#5725.00	64.4 AV	74.8	-10.4	1.04 H	300	25.20	39.20
3	*5745.00	105.1 PK			1.04 H	300	65.80	39.30
4	*5745.00	94.8 AV			1.04 H	300	55.50	39.30
5	11490.00	53.2 PK	74.0	-20.8	1.32 H	273	3.80	49.40
6	11490.00	43.0 AV	54.0	-11.0	1.32 H	273	-6.40	49.40
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	#5725.00	84.2 PK	90.1	-5.9	1.00 V	32	45.00	39.20
2	#5725.00	69.2 AV	79.2	-10.0	1.00 V	32	30.00	39.20
3	*5745.00	110.1 PK			1.00 V	32	70.80	39.30
4	*5745.00	99.2 AV			1.00 V	32	59.90	39.30
5	11490.00	56.7 PK	74.0	-17.3	1.05 V	173	7.30	49.40
6	11490.00	46.1 AV	54.0	-7.9	1.05 V	173	-3.30	49.40

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	1125.00	42.5 PK	74.0	-31.5	1.04 H	162	15.20	27.30
2	1125.00	31.6 AV	54.0	-22.4	1.04 H	162	4.30	27.30
3	*5785.00	105.4 PK			1.02 H	298	66.00	39.40
4	*5785.00	95.1 AV			1.02 H	298	55.70	39.40
5	11570.00	53.5 PK	74.0	-20.5	1.35 H	276	4.30	49.20
6	11570.00	43.2 AV	54.0	-10.8	1.35 H	276	-6.00	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	1125.00	46.2 PK	74.0	-27.8	1.25 V	238	18.90	27.30
2	1125.00	34.4 AV	54.0	-19.6	1.25 V	238	7.10	27.30
3	*5785.00	110.4 PK			1.00 V	35	71.00	39.40
4	*5785.00	99.6 AV			1.00 V	35	60.20	39.40
5	11570.00	56.9 PK	74.0	-17.1	1.09 V	167	7.70	49.20
6	11570.00	46.4 AV	54.0	-7.6	1.09 V	167	-2.80	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 limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5825.00	104.8 PK			1.05 H	303	65.30	39.50
2	*5825.00	94.5 AV			1.05 H	303	55.00	39.50
3	#5850.00	74.3 PK	84.8	-10.5	1.05 H	303	34.80	39.50
4	#5850.00	56.1 AV	74.5	-18.4	1.05 H	303	16.60	39.50
5	11650.00	53.0 PK	74.0	-21.0	1.35 H	272	3.90	49.10
6	11650.00	42.8 AV	54.0	-11.2	1.35 H	272	-6.30	49.10
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	*5825.00	109.8 PK			1.00 V	40	70.30	39.50
2	*5825.00	99.0 AV			1.00 V	40	59.50	39.50
3	#5850.00	76.9 PK	89.8	-12.9	1.00 V	40	37.40	39.50
4	#5850.00	59.4 AV	79.0	-19.6	1.00 V	40	19.90	39.50
5	11650.00	56.4 PK	74.0	-17.6	1.08 V	176	7.30	49.10
6	11650.00	45.9 AV	54.0	-8.1	1.08 V	176	-3.20	49.10

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

802.11n (20MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	#5725.00	82.6 PK	85.3	-2.7	1.14 H	125	43.40	39.20
2	#5725.00	65.5 AV	74.7	-9.2	1.14 H	125	26.30	39.20
3	*5745.00	105.3 PK			1.14 H	125	66.00	39.30
4	*5745.00	94.7 AV			1.14 H	125	55.40	39.30
5	11490.00	56.0 PK	74.0	-18.0	1.00 H	51	6.60	49.40
6	11490.00	43.2 AV	54.0	-10.8	1.00 H	51	-6.20	49.40
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	#5725.00	87.8 PK	89.4	-1.6	1.00 V	195	48.60	39.20
2	#5725.00	69.8 AV	78.8	-9.0	1.00 V	195	30.60	39.20
3	*5745.00	109.4 PK			1.00 V	195	70.10	39.30
4	*5745.00	98.8 AV			1.00 V	195	59.50	39.30
5	11490.00	56.5 PK	74.0	-17.5	1.20 V	250	7.10	49.40
6	11490.00	43.1 AV	54.0	-10.9	1.20 V	250	-6.30	49.40

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5785.00	105.0 PK			1.13 H	121	65.60	39.40
2	*5785.00	94.4 AV			1.13 H	121	55.00	39.40
3	11570.00	55.7 PK	74.0	-18.3	1.00 H	55	6.50	49.20
4	11570.00	43.0 AV	54.0	-11.0	1.00 H	55	-6.20	49.20
5	#17355.00	63.2 PK	85.0	-21.8	1.30 H	350	8.90	54.30
6	#17355.00	50.2 AV	74.4	-24.2	1.30 H	350	-4.10	54.30
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	*5785.00	109.0 PK			1.00 V	186	69.60	39.40
2	*5785.00	98.3 AV			1.00 V	186	58.90	39.40
3	11570.00	56.3 PK	74.0	-17.7	1.23 V	253	7.10	49.20
4	11570.00	42.9 AV	54.0	-11.1	1.23 V	253	-6.30	49.20
5	#17355.00	63.1 PK	89.0	-25.9	1.08 V	311	8.80	54.30
6	#17355.00	49.8 AV	78.3	-28.5	1.08 V	311	-4.50	54.30

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5825.00	105.9 PK			1.13 H	122	66.40	39.50
2	*5825.00	95.2 AV			1.13 H	122	55.70	39.50
3	#5850.00	73.8 PK	85.9	-12.1	1.13 H	122	34.30	39.50
4	#5850.00	56.7 AV	75.2	-18.5	1.13 H	122	17.20	39.50
5	11650.00	55.7 PK	74.0	-18.3	1.00 H	58	6.60	49.10
6	11650.00	42.9 AV	54.0	-11.1	1.00 H	58	-6.20	49.10
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	*5825.00	108.9 PK			1.00 V	184	69.40	39.50
2	*5825.00	98.6 AV			1.00 V	184	59.10	39.50
3	#5850.00	79.5 PK	88.9	-9.4	1.00 V	184	40.00	39.50
4	#5850.00	61.2 AV	78.6	-17.4	1.00 V	184	21.70	39.50
5	11650.00	56.1 PK	74.0	-17.9	1.21 V	252	7.00	49.10
6	11650.00	42.8 AV	54.0	-11.2	1.21 V	252	-6.30	49.10

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

802.11n (40MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	#5725.00	81.4 PK	83.3	-1.9	1.13 H	301	42.20	39.20
2	#5725.00	69.4 AV	72.6	-3.2	1.13 H	301	30.20	39.20
3	*5755.00	103.3 PK			1.13 H	301	64.00	39.30
4	*5755.00	92.6 AV			1.13 H	301	53.30	39.30
5	11510.00	56.3 PK	74.0	-17.7	1.30 H	260	6.90	49.40
6	11510.00	43.9 AV	54.0	-10.1	1.30 H	260	-5.50	49.40
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	#5725.00	85.7 PK	87.8	-2.1	1.00 V	34	46.50	39.20
2	#5725.00	74.4 AV	77.1	-2.7	1.00 V	34	35.20	39.20
3	*5755.00	107.8 PK			1.00 V	34	68.50	39.30
4	*5755.00	97.1 AV			1.00 V	34	57.80	39.30
5	11510.00	56.0 PK	74.0	-18.0	1.02 V	83	6.60	49.40
6	11510.00	43.6 AV	54.0	-10.4	1.02 V	83	-5.80	49.40

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5795.00	103.3 PK			1.12 H	299	63.90	39.40
2	*5795.00	92.6 AV			1.12 H	299	53.20	39.40
3	#5850.00	68.7 PK	83.3	-14.6	1.12 H	299	29.20	39.50
4	#5850.00	53.3 AV	72.6	-19.3	1.12 H	299	13.80	39.50
5	11590.00	56.6 PK	74.0	-17.4	1.33 H	256	7.50	49.10
6	11590.00	44.3 AV	54.0	-9.7	1.33 H	256	-4.80	49.10
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	*5795.00	107.4 PK			1.00 V	38	68.00	39.40
2	*5795.00	96.7 AV			1.00 V	38	57.30	39.40
3	#5850.00	73.2 PK	87.4	-14.2	1.00 V	38	33.70	39.50
4	#5850.00	56.2 AV	76.7	-20.5	1.00 V	38	16.70	39.50
5	11590.00	56.4 PK	74.0	-17.6	1.05 V	87	7.30	49.10
6	11590.00	43.9 AV	54.0	-10.1	1.05 V	87	-5.20	49.10

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

802.11n (20MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	#5725.00	81.6 PK	86.6	-5.0	1.30 H	300	42.40	39.20
2	#5725.00	65.9 AV	73.8	-7.9	1.30 H	300	26.70	39.20
3	*5745.00	106.6 PK			1.30 H	300	67.30	39.30
4	*5745.00	93.8 AV			1.30 H	300	54.50	39.30
5	11490.00	56.2 PK	74.0	-17.8	1.35 H	92	6.80	49.40
6	11490.00	43.1 AV	54.0	-10.9	1.35 H	92	-6.30	49.40
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	#5725.00	86.2 PK	90.8	-4.6	1.10 V	40	47.00	39.20
2	#5725.00	70.7 AV	77.5	-6.8	1.10 V	40	31.50	39.20
3	*5745.00	110.8 PK			1.10 V	40	71.50	39.30
4	*5745.00	97.5 AV			1.10 V	40	58.20	39.30
5	11490.00	55.9 PK	74.0	-18.1	1.00 V	85	6.50	49.40
6	11490.00	43.1 AV	54.0	-10.9	1.00 V	85	-6.30	49.40

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	1125.00	43.2 PK	74.0	-30.8	1.00 H	162	15.90	27.30
2	1125.00	32.2 AV	54.0	-21.8	1.00 H	162	4.90	27.30
3	*5785.00	107.0 PK			1.27 H	297	67.60	39.40
4	*5785.00	94.2 AV			1.27 H	297	54.80	39.40
5	11570.00	56.5 PK	74.0	-17.5	1.32 H	96	7.30	49.20
6	11570.00	43.4 AV	54.0	-10.6	1.32 H	96	-5.80	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	1125.00	47.2 PK	74.0	-26.8	1.26 V	270	19.90	27.30
2	1125.00	35.1 AV	54.0	-18.9	1.26 V	270	7.80	27.30
3	*5785.00	111.1 PK			1.07 V	44	71.70	39.40
4	*5785.00	97.8 AV			1.07 V	44	58.40	39.40
5	11570.00	56.2 PK	74.0	-17.8	1.00 V	83	7.00	49.20
6	11570.00	43.3 AV	54.0	-10.7	1.00 V	83	-5.90	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 limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5825.00	106.6 PK			1.30 H	301	67.10	39.50
2	*5825.00	93.7 AV			1.30 H	301	54.20	39.50
3	#5850.00	73.6 PK	86.6	-13.0	1.30 H	301	34.10	39.50
4	#5850.00	58.0 AV	73.7	-15.7	1.30 H	301	18.50	39.50
5	11650.00	56.5 PK	74.0	-17.5	1.32 H	95	7.40	49.10
6	11650.00	43.4 AV	54.0	-10.6	1.32 H	95	-5.70	49.10
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	*5825.00	110.0 PK			1.07 V	43	70.50	39.50
2	*5825.00	96.7 AV			1.07 V	43	57.20	39.50
3	#5850.00	76.3 PK	90.0	-13.7	1.07 V	43	36.80	39.50
4	#5850.00	60.9 AV	76.7	-15.8	1.07 V	43	21.40	39.50
5	11650.00	56.2 PK	74.0	-17.8	1.00 V	89	7.10	49.10
6	11650.00	43.4 AV	54.0	-10.6	1.00 V	89	-5.70	49.10

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

802.11n (40MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	#5725.00	80.1 PK	83.4	-3.3	1.03 H	297	40.90	39.20
2	#5725.00	66.1 AV	72.7	-6.6	1.03 H	297	26.90	39.20
3	*5755.00	103.4 PK			1.03 H	297	64.10	39.30
4	*5755.00	92.7 AV			1.03 H	297	53.40	39.30
5	11510.00	55.8 PK	74.0	-18.2	1.32 H	95	6.40	49.40
6	11510.00	42.8 AV	54.0	-11.2	1.32 H	95	-6.60	49.40
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	#5725.00	85.0 PK	87.3	-2.3	1.00 V	43	45.80	39.20
2	#5725.00	70.9 AV	76.3	-5.4	1.00 V	43	31.70	39.20
3	*5755.00	107.3 PK			1.00 V	43	68.00	39.30
4	*5755.00	96.3 AV			1.00 V	43	57.00	39.30
5	11510.00	55.5 PK	74.0	-18.5	1.00 V	81	6.10	49.40
6	11510.00	42.7 AV	54.0	-11.3	1.00 V	81	-6.70	49.40

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	*5795.00	103.2 PK			1.02 H	300	63.80	39.40
2	*5795.00	92.3 AV			1.02 H	300	52.90	39.40
3	#5850.00	68.5 PK	83.2	-14.7	1.02 H	300	29.00	39.50
4	#5850.00	53.2 AV	72.3	-19.1	1.02 H	300	13.70	39.50
5	11590.00	55.6 PK	74.0	-18.4	1.35 H	98	6.50	49.10
6	11590.00	42.5 AV	54.0	-11.5	1.35 H	98	-6.60	49.10
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	*5795.00	107.2 PK			1.00 V	46	67.80	39.40
2	*5795.00	96.4 AV			1.00 V	46	57.00	39.40
3	#5850.00	71.2 PK	87.2	-16.0	1.00 V	46	31.70	39.50
4	#5850.00	55.3 AV	76.4	-21.1	1.00 V	46	15.80	39.50
5	11590.00	55.1 PK	74.0	-18.9	1.00 V	83	6.00	49.10
6	11590.00	42.4 AV	54.0	-11.6	1.00 V	83	-6.70	49.10

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 limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

BELOW 1GHz WORST-CASE DATA：

802.11n (20MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Anderson Hong

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	43.58	23.1 QP	40.0	-16.9	1.25 H	234	9.30	13.80
2	289.96	28.5 QP	46.0	-17.5	1.00 H	113	14.00	14.50
3	386.96	22.8 QP	46.0	-23.2	1.00 H	127	5.70	17.10
4	480.08	32.7 QP	46.0	-13.3	1.50 H	294	13.10	19.60
5	544.10	27.2 QP	46.0	-18.8	1.00 H	200	6.10	21.10
6	720.64	33.3 QP	46.0	-12.7	1.00 H	228	10.00	23.30
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	30.00	37.0 QP	40.0	-3.0	1.00 V	286	25.10	11.90
2	140.58	30.1 QP	43.5	-13.4	1.00 V	9	16.50	13.60
3	189.08	27.5 QP	43.5	-16.0	1.25 V	224	15.50	12.00
4	386.96	29.4 QP	46.0	-16.6	1.25 V	16	12.30	17.10
5	480.08	33.4 QP	46.0	-12.6	1.00 V	305	13.80	19.60
6	720.64	29.5 QP	46.0	-16.5	1.50 V	247	6.20	23.30

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.

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 T EST INSTRUMENTS

Same as item 4.2.2.

5.2.3 TEST PROCEDURES

Same as item 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as item 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：

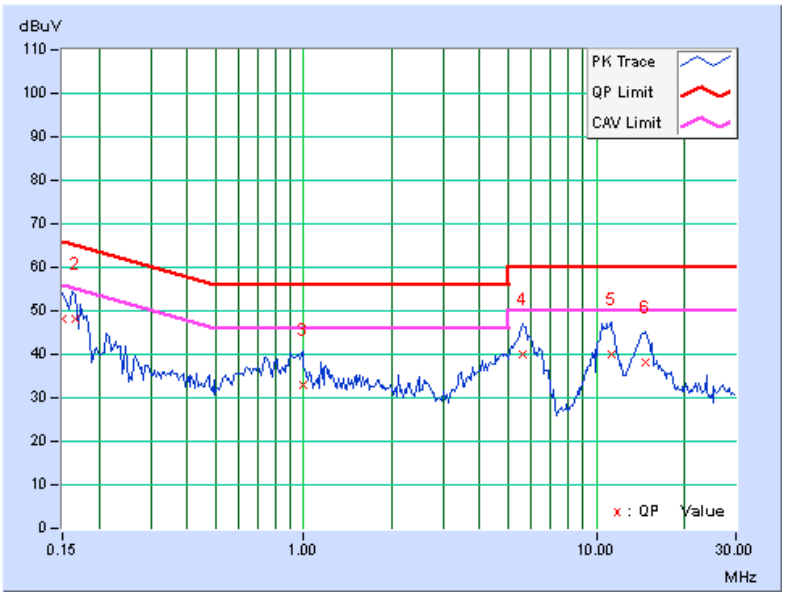
802.11a (20MHz): 2TX

PHASE	Line 1	6dB BANDWIDTH	9kHz

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	0.15000	0.11	48.13	33.81	48.24	33.92	66.00	56.00	-17.76	-22.08
2	0.16562	0.12	48.20	36.01	48.32	36.13	65.18	55.18	-16.86	-19.05
3	0.99375	0.19	32.90	23.76	33.09	23.95	56.00	46.00	-22.91	-22.05
4	5.59766	0.42	39.73	29.67	40.15	30.09	60.00	50.00	-19.85	-19.91
5	11.21484	0.70	39.13	30.48	39.83	31.18	60.00	50.00	-20.17	-18.82
6	14.70313	0.89	37.31	29.51	38.20	30.40	60.00	50.00	-21.80	-19.60

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.

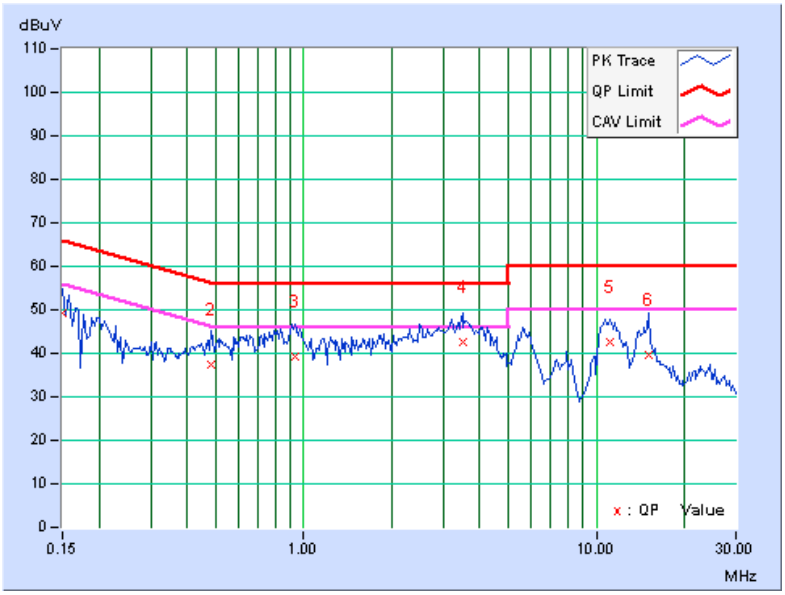


PHASE	Line 2	6dB BANDWIDTH	9kHz

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	0.15000	0.12	49.15	34.29	49.27	34.41	66.00	56.00	-16.73	-21.59
2	0.48203	0.16	37.42	28.42	37.58	28.58	56.30	46.30	-18.73	-17.73
3	0.93906	0.20	39.13	29.74	39.33	29.94	56.00	46.00	-16.67	-16.06
4	3.50781	0.32	42.35	34.72	42.67	35.04	56.00	46.00	-13.33	-10.96
5	11.14844	0.63	41.96	35.51	42.59	36.14	60.00	50.00	-17.41	-13.86
6	15.12109	0.78	39.02	31.97	39.80	32.75	60.00	50.00	-20.20	-17.25

REMARKS:

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



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as item 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as item 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as item 4.3.6.

5.3.7 TEST RESULTS

802.11a: 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	16.51	0.5	PASS
157	5785	16.54	0.5	PASS
165	5825	16.54	0.5	PASS

802.11n (20MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	17.74	0.5	PASS
157	5785	17.73	0.5	PASS
165	5825	17.75	0.5	PASS

802.11n (40MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	36.21	0.5	PASS
159	5795	36.22	0.5	PASS

802.11n (20MHz): 2TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	17.76	17.79	0.5	PASS
157	5785	17.74	17.80	0.5	PASS
165	5825	17.77	17.82	0.5	PASS

802.11n (20MHz): 2TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
151	5755	36.11	36.03	0.5	PASS
159	5795	36.17	36.04	0.5	PASS

5.4 CONDUCTED OUTPUT POWER

5.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 5725 –5850 MHz bands: 1 Watt (30dBm)

5.4.2 TEST SETUP

Same as Item 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as Item 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

5.4.7 TEST RESULTS

802.11a: 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	165.20	22.18	30	PASS
157	5785	164.06	22.15	30	PASS
165	5825	158.12	21.99	30	PASS

802.11n (20MHz): 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	161.06	22.07	30	PASS
157	5785	164.44	22.16	30	PASS
165	5825	156.31	21.94	30	PASS

802.11n (40MHz): 1TX

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
151	5755	158.85	22.01	30	PASS
159	5795	157.76	21.98	30	PASS

802.11n (20MHz): 2TX

CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
149	5745	20.18	20.54	217.47	23.37	30	PASS
157	5785	20.20	20.70	222.20	23.47	30	PASS
165	5825	20.01	20.55	213.73	23.30	30	PASS

802.11n (40MHz): 2TX

CHAN.	FREQUENCY (MHz)	PEAK POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
151	5755	20.28	20.60	221.47	23.45	30	PASS
159	5795	20.08	20.30	209.01	23.20	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as item 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as item 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.

5.5.7 TEST RESULTS

802.11a: 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	5.66	-9.57	8	PASS
157	5785	5.65	-9.58	8	PASS
165	5825	5.69	-9.54	8	PASS

802.11n (20MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	5.53	-9.70	8	PASS
157	5785	5.68	-9.55	8	PASS
165	5825	5.57	-9.66	8	PASS

802.11n (40MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
151	5755	3.71	-11.52	8	PASS
159	5795	3.74	-11.49	8	PASS

802.11n (20MHz): 2TX

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	149	5745	3.21	-12.02	3.01	-9.01	8	PASS
	157	5785	3.21	-12.02	3.01	-9.01	8	PASS
	165	5825	3.13	-12.10	3.01	-9.09	8	PASS
1	149	5745	3.68	-11.55	3.01	-8.54	8	PASS
	157	5785	3.78	-11.45	3.01	-8.44	8	PASS
	165	5825	3.55	-11.68	3.01	-8.67	8	PASS

802.11n (40MHz): 2TX

TX chain	Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	151	5755	0.48	-14.75	3.01	-11.74	8	PASS
	159	5795	0.33	-14.90	3.01	-11.89	8	PASS
1	151	5755	0.52	-14.71	3.01	-11.70	8	PASS
	159	5795	0.13	-15.10	3.01	-12.09	8	PASS

5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST SETUP

Same as Item 4.6.2

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as Item 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

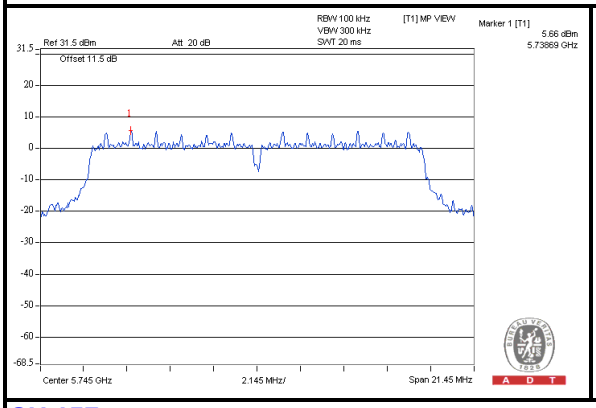
5.6.7 TEST RESULTS

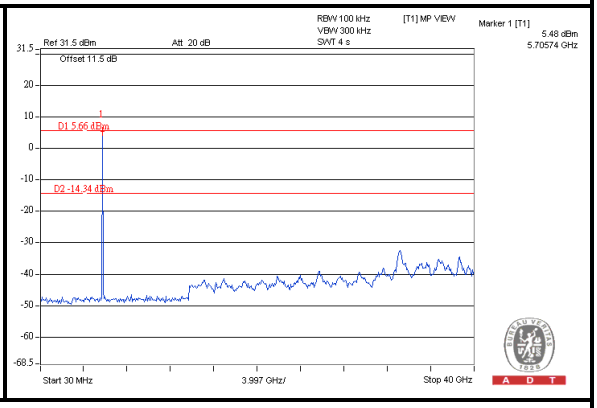
The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit. Only worst data of each operating mode is presented.

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

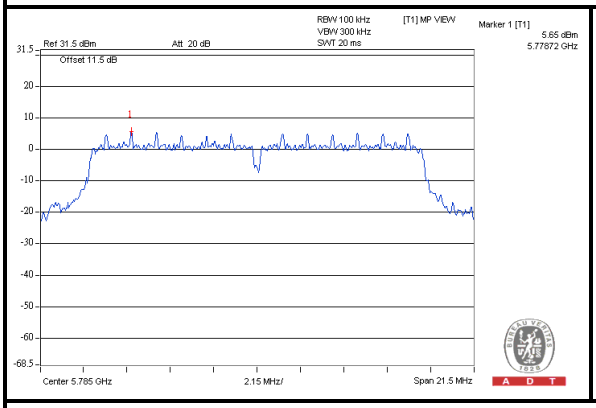
802.11a: 1TX

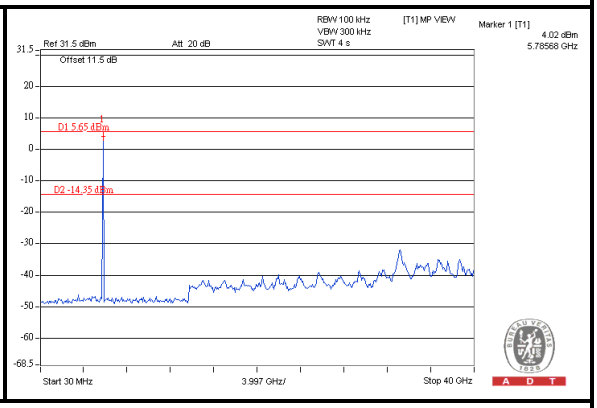
CH 149



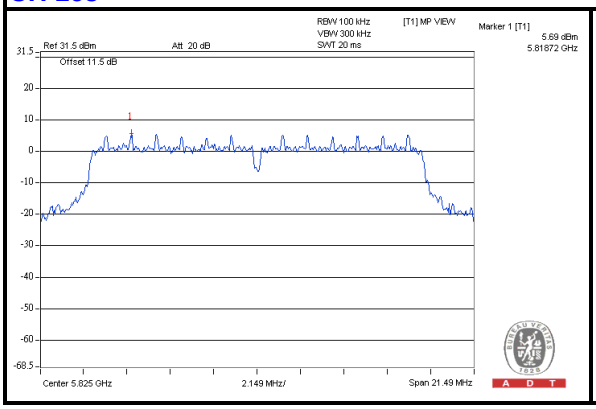


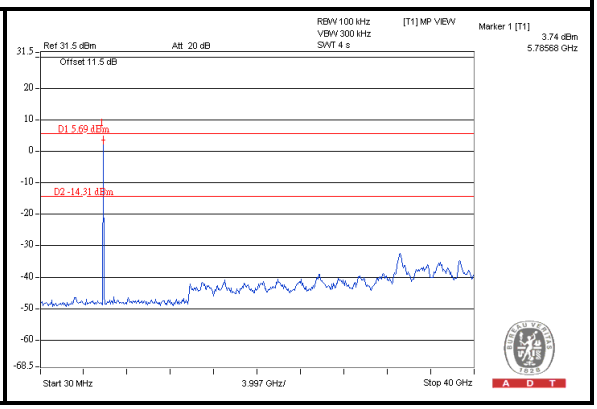
CH 157





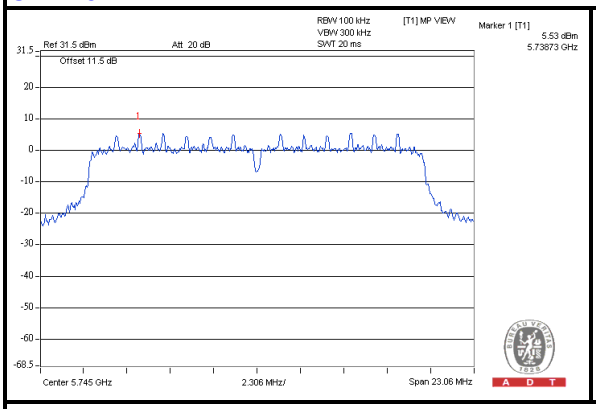
CH 165

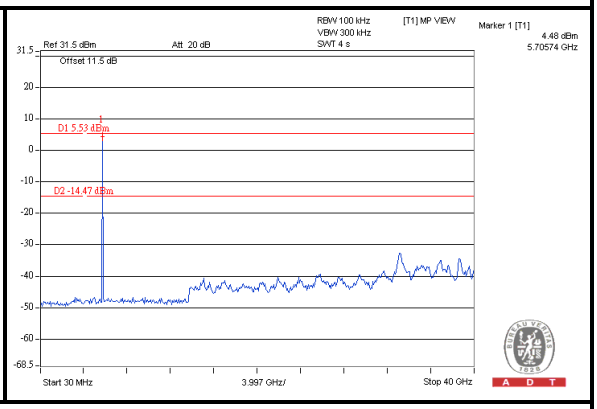




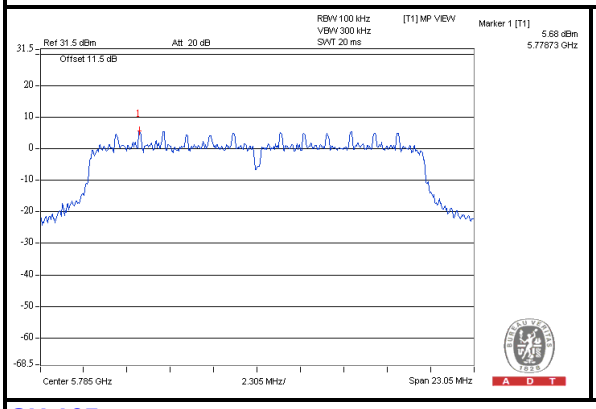
802.11n (20MHz): 1TX

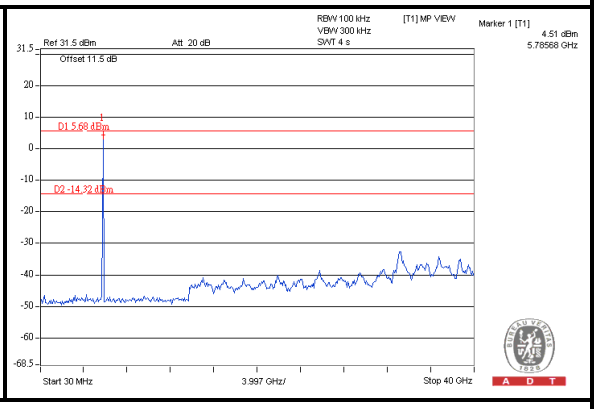
CH 149



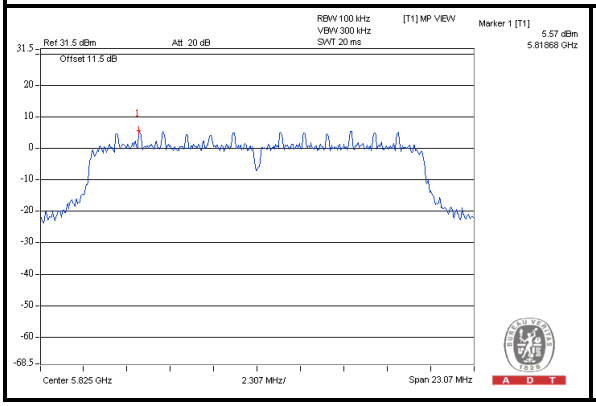


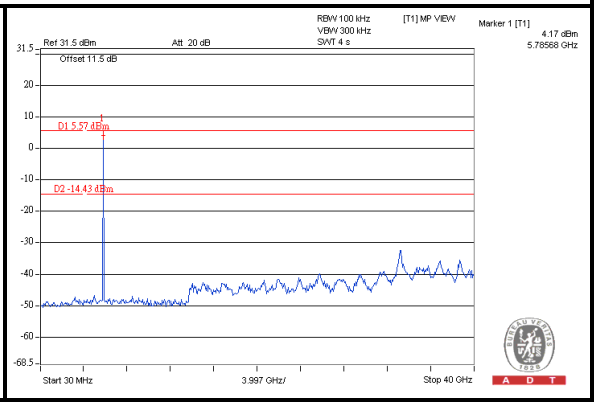
CH 157





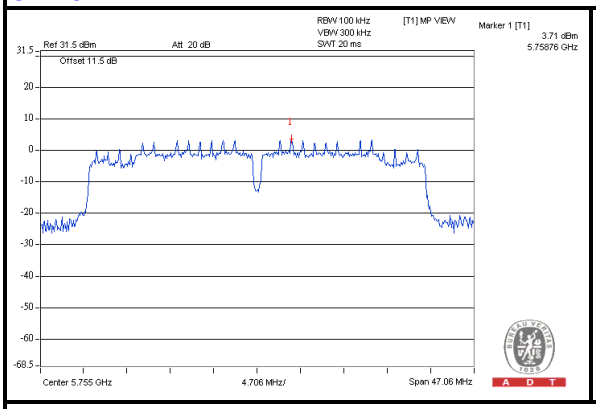
CH 165

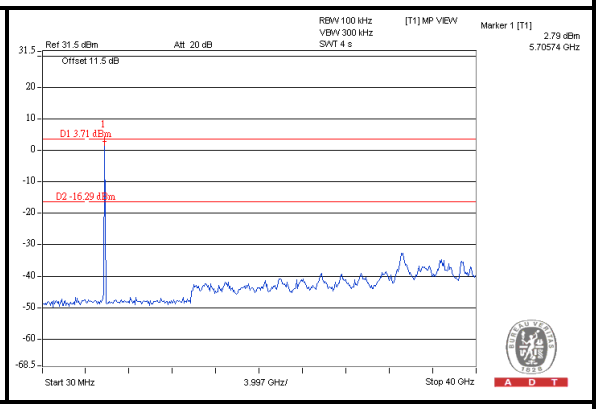




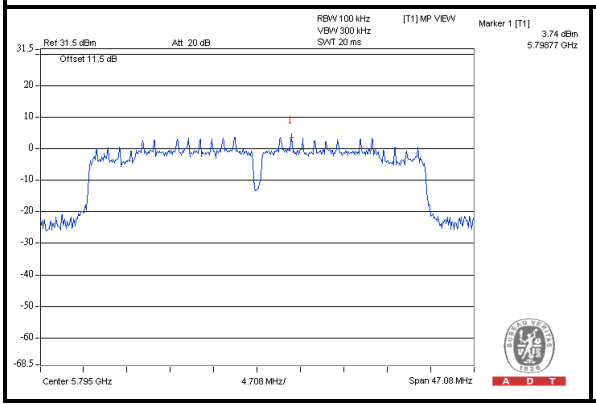
802.11n (40MHz): 1TX

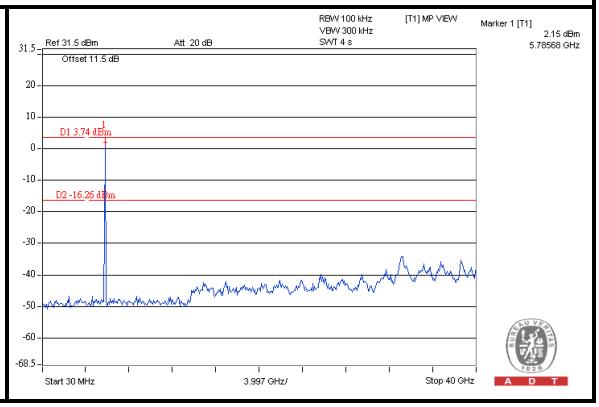
CH 151





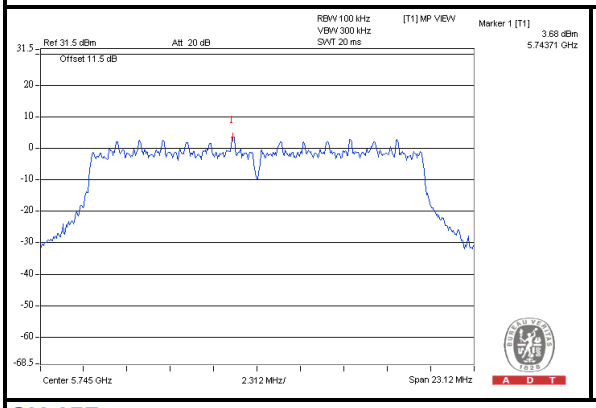
CH 159

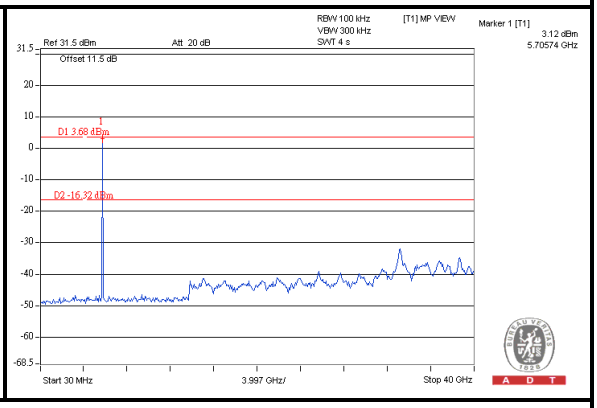




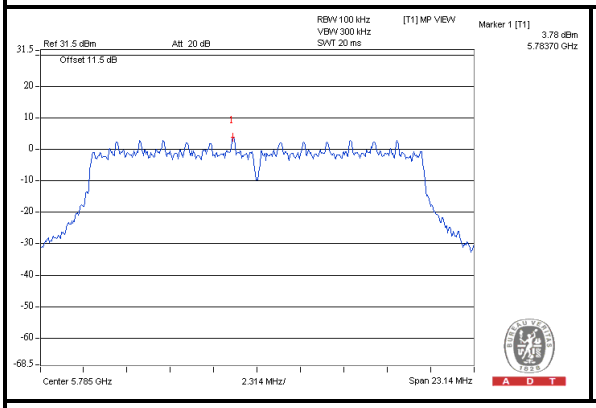
802.11n (20MHz): 2TX

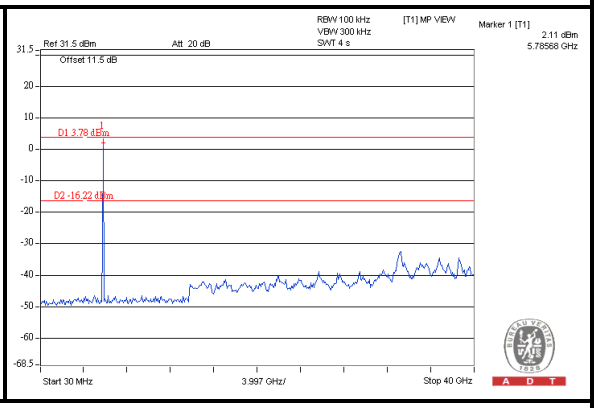
CH 149



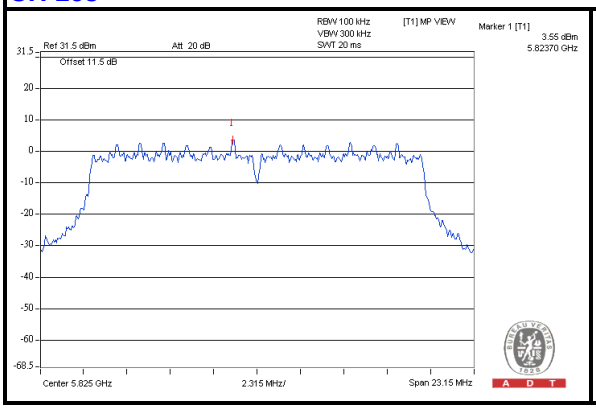


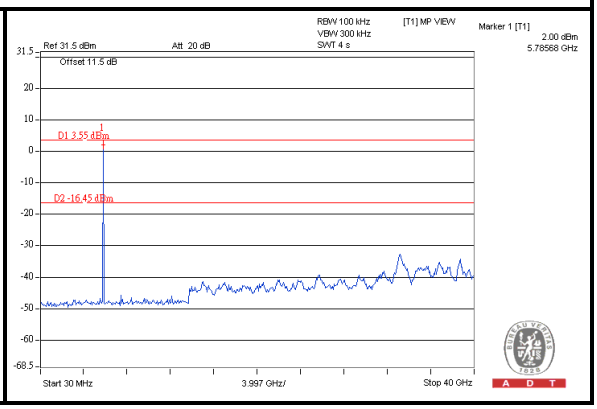
CH 157





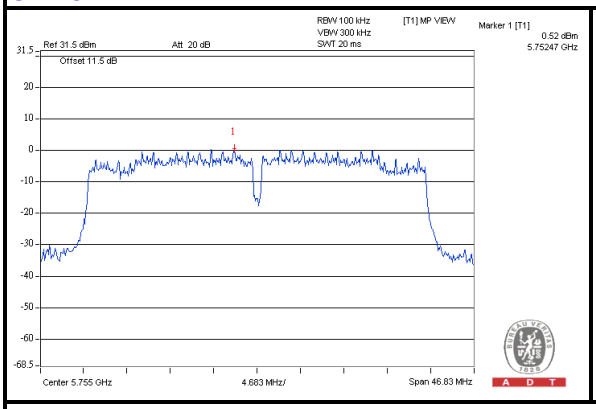
CH 165

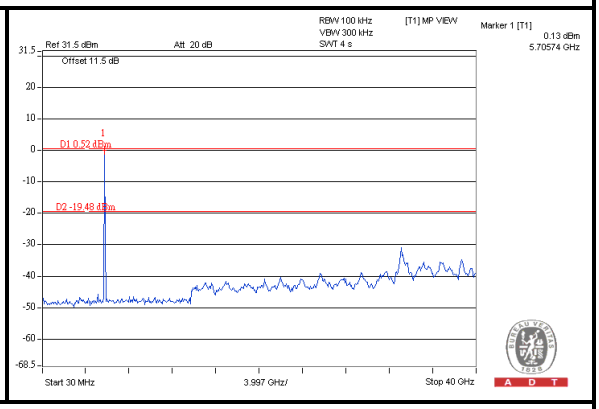




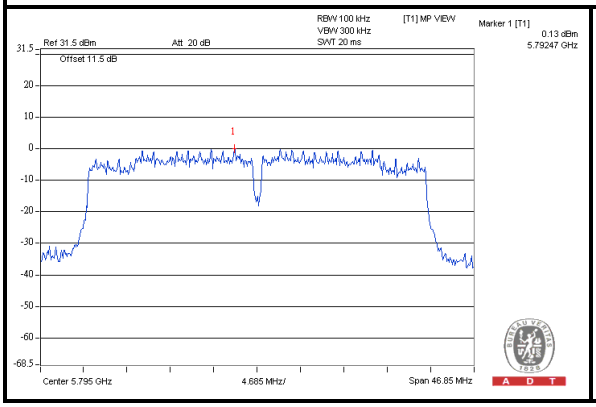
802.11n (40MHz): 2TX

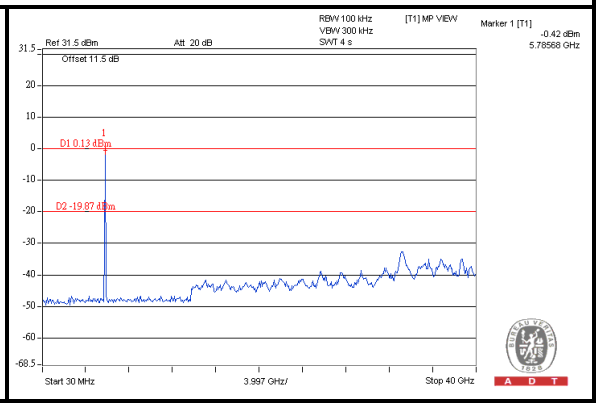
CH 151





CH 159





6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

7. 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:

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

Hsin Chu EMC/RF Lab
Tel: 886-3-5935343
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Hwa Ya EMC/RF/Safety/Telecom Lab
Tel: 886-3-3183232
Fax: 886-3-3270892
Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

8. 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---