



FCC TEST REPORT

REPORT NO.: RF111104C25
MODEL NO.: AW-NU203
FCC ID: MDZAZWAR9271-WL
RECEIVED: Nov. 04, 2011
TESTED: Nov. 08 ~ Nov. 10, 2011
ISSUED: Nov. 14, 2011

APPLICANT: Amtran Technology Co Ltd

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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.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Nov. 14, 2011



1. CERTIFICATION

PRODUCT: IEEE 802.11 b/g/n USB wireless module 16 digits MAC for Amtran

MODEL: AW-NU203

BRAND: AmTRAN

APPLICANT: Amtran Technology Co Ltd

TESTED: Nov. 08 ~ Nov. 10, 2011

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart C (Section 15.247)

ANSI C63.4-2003

ANSI C63.10-2009

The above equipment (model: AW-NU203) 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 :


Andrea Hsia / Specialist

DATE : Nov. 14, 2011

APPROVED BY :


Gary Chang / Technical Manager

DATE : Nov. 14, 2011

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 -18.13dB at 0.164MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.9dB at 2390.0 & 2483.5MHz.
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	Antenna connector is IPEX.

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	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	IEEE 802.11 b/g/n USB wireless module 16 digits MAC for Amtran
MODEL NO.	AW-NU203
FCC ID	MDZAZWAR9271-WL
POWER SUPPLY	5Vdc
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 802.11n: up to 150.0Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz)
OUTPUT POWER	363.1mW
ANTENNA TYPE	Refer to note as below
ANTENNA CONNECTOR	Refer to note as below
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

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

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

2. The following antennas were provided to the EUT.

ITEM	BRAND	MODEL	TYPE	ANT. GAIN	ANT. CONNECTOR
1	MAG. LAYERS	NSA-3420-25GC4-A1-B160MM	PIFA	2.37dBi	IPEX
2		NSA-3414-25GC4-A1-B160MM-RF	PIFA	3.97dBi	

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

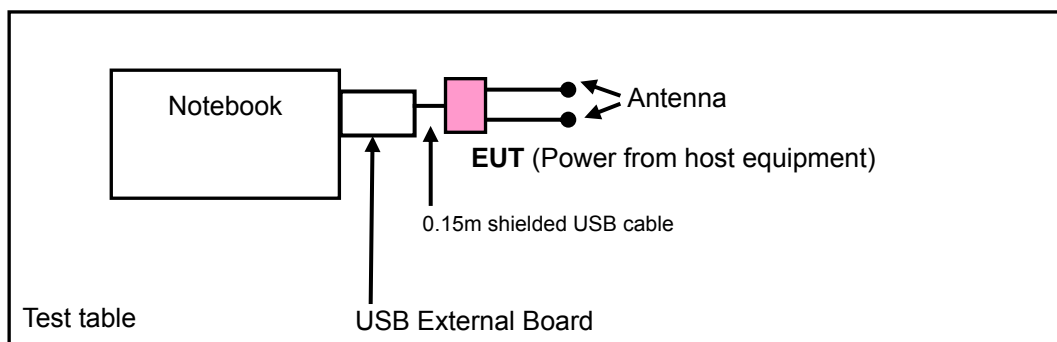
11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

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
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 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	HP	NC6000	CNU4110Y6Q	FCC DoC Approved
2	USB EXTERNAL BOARD	NA	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	0.15m shielded USB cable

NOTE:

1. All power cords of the above support units are non shielded (1.8m).
2. Item 2 & USB cable were supplied from client.

3.2.3 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT with antenna item 1
B	√	√	√	√	EUT with antenna item 2

Where **RE \geq 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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A & B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A & B	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11g	1 to 11	6	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11g	1 to 11	6	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
A & B	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5
A & B	802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A & B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A & B	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A & B	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Match Tsui
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Match Tsui
PLC	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
APCM	24deg. C, 64%RH	120Vac, 60Hz	Sun Lin



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart C (15.247)

ANSI C63.4-2003

ANSI C63.10-2009

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

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

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED AND BANDEDGE EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). 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. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP 40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 13, 2011	Apr. 12, 2012
HORN Antenna SCHWARZBECK	9120D	209	Aug. 25, 2011	Aug. 24, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8447D	2944A10633	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01964	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295014/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	Aug. 19, 2011	Aug. 18, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 3.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 988962.
 5. The IC Site Registration No. is IC 7450F-3.

4.1.3 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. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to 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.

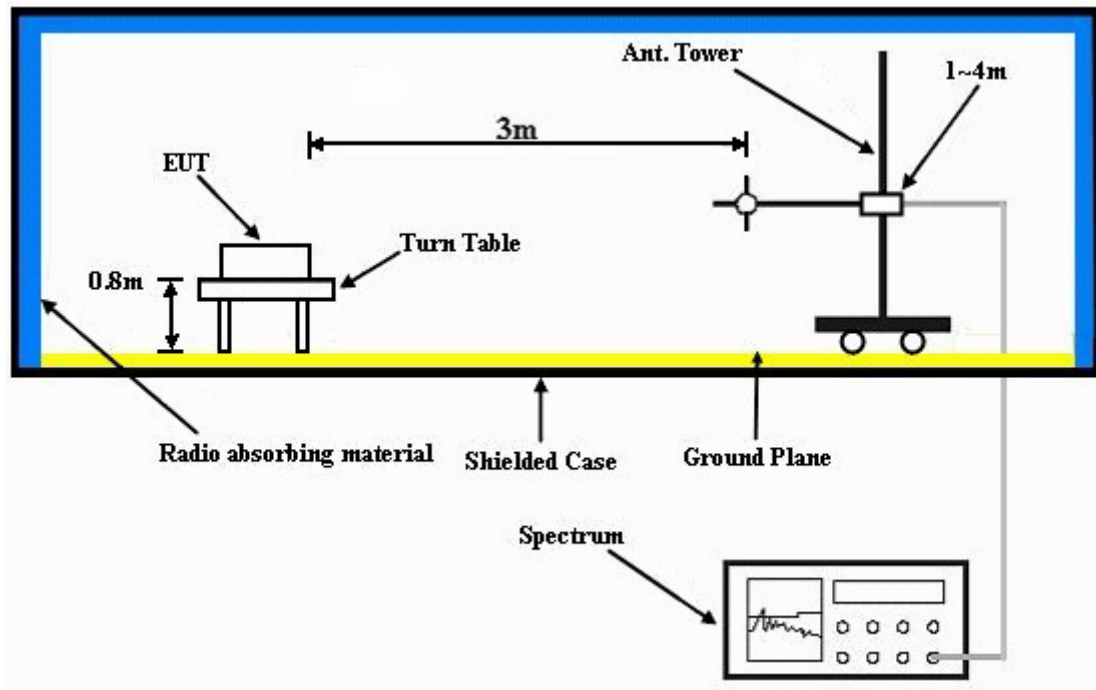
NOTE:

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 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 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. Plugged the EUT into notebook via USB board and placed them on the testing table.
- b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- c. The necessary accessories enable the system in full functions.

4.1.7 TEST RESULTS

ABOVE 1GHz DATA : 802.11b

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	60.0 PK	74.0	-14.0	1.00 H	179	28.90	31.10
2	2390.00	49.8 AV	54.0	-4.2	1.00 H	179	18.70	31.10
3	*2412.00	104.6 PK			1.00 H	179	73.40	31.20
4	*2412.00	99.8 AV			1.00 H	179	68.60	31.20
5	4824.00	49.1 PK	74.0	-24.9	1.14 H	148	12.20	36.90
6	4824.00	40.7 AV	54.0	-13.3	1.14 H	148	3.80	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.2 PK	74.0	-13.8	1.02 V	247	29.10	31.10
2	2390.00	50.0 AV	54.0	-4.0	1.02 V	247	18.90	31.10
3	*2412.00	108.4 PK			1.02 V	247	77.20	31.20
4	*2412.00	103.2 AV			1.02 V	247	72.00	31.20
5	4824.00	49.4 PK	74.0	-24.6	1.00 V	213	12.50	36.90
6	4824.00	41.9 AV	54.0	-12.1	1.00 V	213	5.00	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	60.8 PK	74.0	-13.2	1.00 H	183	29.70	31.10
2	2390.00	49.9 AV	54.0	-4.1	1.00 H	183	18.80	31.10
3	*2437.00	108.0 PK			1.00 H	183	76.70	31.30
4	*2437.00	103.2 AV			1.00 H	183	71.90	31.30
5	4874.00	52.4 PK	74.0	-21.6	1.01 H	149	15.40	37.00
6	4874.00	48.1 AV	54.0	-5.9	1.01 H	149	11.10	37.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.7 PK	74.0	-14.3	1.07 V	194	28.60	31.10
2	2390.00	50.3 AV	54.0	-3.7	1.07 V	194	19.20	31.10
3	*2437.00	113.7 PK			1.07 V	194	82.40	31.30
4	*2437.00	108.6 AV			1.07 V	194	77.30	31.30
5	4874.00	53.1 PK	74.0	-20.9	1.00 V	228	16.10	37.00
6	4874.00	49.5 AV	54.0	-4.5	1.00 V	228	12.50	37.00

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

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	105.9 PK			1.00 H	183	74.50	31.40
2	*2462.00	101.6 AV			1.00 H	183	70.20	31.40
3	2483.50	59.8 PK	74.0	-14.2	1.00 H	183	28.40	31.40
4	2483.50	50.3 AV	54.0	-3.7	1.00 H	183	18.90	31.40
5	4924.00	48.9 PK	74.0	-25.1	1.01 H	149	11.80	37.10
6	4924.00	40.1 AV	54.0	-13.9	1.01 H	149	3.00	37.10
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	*2462.00	109.8 PK			1.31 V	196	78.40	31.40
2	*2462.00	104.9 AV			1.31 V	196	73.50	31.40
3	2483.50	60.6 PK	74.0	-13.4	1.31 V	196	29.20	31.40
4	2483.50	51.2 AV	54.0	-2.8	1.31 V	196	19.80	31.40
5	4924.00	49.8 PK	74.0	-24.2	1.00 V	230	12.70	37.10
6	4924.00	41.4 AV	54.0	-12.6	1.00 V	230	4.30	37.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	61.5 PK	74.0	-12.5	1.41 H	43	30.40	31.10
2	2390.00	52.6 AV	54.0	-1.4	1.41 H	43	21.50	31.10
3	*2412.00	108.2 PK			1.17 H	24	77.00	31.20
4	*2412.00	104.1 AV			1.17 H	24	72.90	31.20
5	4824.00	49.4 PK	74.0	-24.6	1.00 H	8	12.50	36.90
6	4824.00	44.1 AV	54.0	-9.9	1.00 H	8	7.20	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.6 PK	74.0	-18.4	1.00 V	0	24.50	31.10
2	2390.00	46.3 AV	54.0	-7.7	1.00 V	0	15.20	31.10
3	*2412.00	106.7 PK			1.00 V	339	75.50	31.20
4	*2412.00	102.4 AV			1.00 V	339	71.20	31.20
5	4824.00	51.0 PK	74.0	-23.0	1.08 V	347	14.10	36.90
6	4824.00	45.8 AV	54.0	-8.2	1.08 V	347	8.90	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	107.9 PK			1.39 H	25	76.60	31.30
2	*2437.00	104.0 AV			1.39 H	25	72.70	31.30
3	4874.00	51.4 PK	74.0	-22.6	1.11 H	355	14.40	37.00
4	4874.00	46.0 AV	54.0	-8.0	1.11 H	355	9.00	37.00
5	7311.00	51.2 PK	74.0	-22.8	1.00 H	30	8.10	43.10
6	7311.00	37.4 AV	54.0	-16.6	1.00 H	30	-5.70	43.10
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	*2437.00	106.1 PK			1.00 V	335	74.80	31.30
2	*2437.00	102.3 AV			1.00 V	335	71.00	31.30
3	4874.00	51.1 PK	74.0	-22.9	1.12 V	23	14.10	37.00
4	4874.00	45.8 AV	54.0	-8.2	1.12 V	23	8.80	37.00
5	7311.00	51.4 PK	74.0	-22.6	1.00 V	25	8.30	43.10
6	7311.00	37.6 AV	54.0	-16.4	1.00 V	25	-5.50	43.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	107.0 PK			1.39 H	23	75.60	31.40
2	*2462.00	103.2 AV			1.39 H	23	71.80	31.40
3	2483.50	56.5 PK	74.0	-17.5	1.46 H	281	25.10	31.40
4	2483.50	45.4 AV	54.0	-8.6	1.46 H	281	14.00	31.40
5	4924.00	50.4 PK	74.0	-23.6	1.33 H	355	13.30	37.10
6	4924.00	45.5 AV	54.0	-8.5	1.33 H	355	8.40	37.10
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	*2462.00	104.5 PK			1.00 V	352	73.10	31.40
2	*2462.00	100.8 AV			1.00 V	352	69.40	31.40
3	2483.50	55.6 PK	74.0	-18.4	1.00 V	339	24.20	31.40
4	2483.50	44.3 AV	54.0	-9.7	1.00 V	339	12.90	31.40
5	4924.00	50.1 PK	74.0	-23.9	1.12 V	5	13.00	37.10
6	4924.00	44.9 AV	54.0	-9.1	1.12 V	5	7.80	37.10

- 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.

802.11g

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	61.5 PK	74.0	-12.5	1.00 H	180	30.40	31.10
2	2390.00	50.5 AV	54.0	-3.5	1.00 H	180	19.40	31.10
3	*2412.00	105.3 PK			1.00 H	180	74.10	31.20
4	*2412.00	93.8 AV			1.00 H	180	62.60	31.20
5	4824.00	45.6 PK	74.0	-28.4	1.00 H	180	8.70	36.90
6	4824.00	33.2 AV	54.0	-20.8	1.00 H	180	-3.70	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.3 PK	74.0	-5.7	1.10 V	192	37.20	31.10
2	2390.00	52.3 AV	54.0	-1.7	1.10 V	192	21.20	31.10
3	*2412.00	109.3 PK			1.35 V	190	78.10	31.20
4	*2412.00	98.0 AV			1.35 V	190	66.80	31.20
5	4824.00	46.0 PK	74.0	-28.0	1.00 V	236	9.10	36.90
6	4824.00	33.2 AV	54.0	-20.8	1.00 V	236	-3.70	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	107.7 PK			1.00 H	181	76.40	31.30
2	*2437.00	96.8 AV			1.00 H	181	65.50	31.30
3	4874.00	51.6 PK	74.0	-22.4	1.00 H	145	14.60	37.00
4	4874.00	37.0 AV	54.0	-17.0	1.00 H	145	0.00	37.00
5	7311.00	51.4 PK	74.0	-22.6	1.00 H	30	8.30	43.10
6	7311.00	37.8 AV	54.0	-16.2	1.00 H	30	-5.30	43.10
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	*2437.00	111.7 PK			1.29 V	246	80.40	31.30
2	*2437.00	100.9 AV			1.29 V	246	69.60	31.30
3	4874.00	54.7 PK	74.0	-19.3	1.00 V	230	17.70	37.00
4	4874.00	38.5 AV	54.0	-15.5	1.00 V	230	1.50	37.00
5	7311.00	51.4 PK	74.0	-22.6	1.00 V	25	8.30	43.10
6	7311.00	37.6 AV	54.0	-16.4	1.00 V	25	-5.50	43.10

- 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.

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	104.8 PK			1.00 H	183	73.40	31.40
2	*2462.00	93.0 AV			1.00 H	183	61.60	31.40
3	2483.50	64.8 PK	74.0	-9.2	1.00 H	146	33.40	31.40
4	2483.50	48.4 AV	54.0	-5.6	1.00 H	146	17.00	31.40
5	4924.00	44.9 PK	74.0	-29.1	1.00 H	256	7.80	37.10
6	4924.00	31.5 AV	54.0	-22.5	1.00 H	256	-5.60	37.10
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	*2462.00	107.2 PK			1.00 V	246	75.80	31.40
2	*2462.00	96.1 AV			1.00 V	246	64.70	31.40
3	2483.50	69.6 PK	74.0	-4.4	1.00 V	246	38.20	31.40
4	2483.50	53.0 AV	54.0	-1.0	1.00 V	246	21.60	31.40
5	4924.00	45.6 PK	74.0	-28.4	1.00 V	25	8.50	37.10
6	4924.00	32.5 AV	54.0	-21.5	1.00 V	25	-4.60	37.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	72.9 PK	74.0	-1.1	1.42 H	39	41.80	31.10
2	2390.00	52.9 AV	54.0	-1.1	1.42 H	39	21.80	31.10
3	*2412.00	105.7 PK			1.17 H	20	74.50	31.20
4	*2412.00	94.8 AV			1.17 H	20	63.60	31.20
5	4824.00	45.6 PK	74.0	-28.4	1.00 H	30	8.70	36.90
6	4824.00	33.2 AV	54.0	-20.8	1.00 H	30	-3.70	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.3 PK	74.0	-8.7	1.00 V	360	34.20	31.10
2	2390.00	47.9 AV	54.0	-6.1	1.00 V	360	16.80	31.10
3	*2412.00	104.3 PK			1.00 V	351	73.10	31.20
4	*2412.00	93.3 AV			1.00 V	351	62.10	31.20
5	4824.00	44.4 PK	74.0	-29.6	1.00 V	25	7.50	36.90
6	4824.00	32.4 AV	54.0	-21.6	1.00 V	25	-4.50	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	110.5 PK			1.17 H	24	79.20	31.30
2	*2437.00	99.7 AV			1.17 H	24	68.40	31.30
3	4874.00	49.5 PK	74.0	-24.5	1.00 H	8	12.50	37.00
4	4874.00	35.1 AV	54.0	-18.9	1.00 H	8	-1.90	37.00
5	7311.00	51.4 PK	74.0	-22.6	1.00 H	25	8.30	43.10
6	7311.00	38.5 AV	54.0	-15.5	1.00 H	25	-4.60	43.10
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	*2437.00	108.7 PK			1.00 V	338	77.40	31.30
2	*2437.00	97.3 AV			1.00 V	338	66.00	31.30
3	4874.00	52.4 PK	74.0	-21.6	1.27 V	4	15.40	37.00
4	4874.00	35.7 AV	54.0	-18.3	1.27 V	4	-1.30	37.00
5	7311.00	51.7 PK	74.0	-22.3	1.00 V	30	8.60	43.10
6	7311.00	38.6 AV	54.0	-15.4	1.00 V	30	-4.50	43.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	106.0 PK			1.40 H	24	74.60	31.40
2	*2462.00	95.1 AV			1.40 H	24	63.70	31.40
3	2483.50	68.2 PK	74.0	-5.8	1.27 H	283	36.80	31.40
4	2483.50	51.2 AV	54.0	-2.8	1.27 H	283	19.80	31.40
5	4924.00	45.8 PK	74.0	-28.2	1.00 H	22	8.70	37.10
6	4924.00	32.8 AV	54.0	-21.2	1.00 H	22	-4.30	37.10
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	*2462.00	103.4 PK			1.00 V	351	72.00	31.40
2	*2462.00	92.7 AV			1.00 V	351	61.30	31.40
3	2483.50	65.0 PK	74.0	-9.0	1.00 V	342	33.60	31.40
4	2483.50	49.3 AV	54.0	-4.7	1.00 V	342	17.90	31.40
5	4924.00	45.4 PK	74.0	-28.6	1.00 V	33	8.30	37.10
6	4924.00	32.7 AV	54.0	-21.3	1.00 V	33	-4.40	37.10

- 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.

802.11n (20MHz)

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	59.8 PK	74.0	-14.2	1.00 H	180	28.70	31.10
2	2390.00	44.3 AV	54.0	-9.7	1.00 H	180	13.20	31.10
3	*2412.00	102.7 PK			1.00 H	181	71.50	31.20
4	*2412.00	91.8 AV			1.00 H	181	60.60	31.20
5	4824.00	45.4 PK	74.0	-28.6	1.00 H	85	8.50	36.90
6	4824.00	32.4 AV	54.0	-21.6	1.00 H	85	-4.50	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.4 PK	74.0	-8.6	1.05 V	248	34.30	31.10
2	2390.00	46.8 AV	54.0	-7.2	1.05 V	248	15.70	31.10
3	*2412.00	104.6 PK			1.00 V	247	73.40	31.20
4	*2412.00	93.5 AV			1.00 V	247	62.30	31.20
5	4824.00	45.3 PK	74.0	-28.7	1.00 V	266	8.40	36.90
6	4824.00	32.8 AV	54.0	-21.2	1.00 V	266	-4.10	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	106.6 PK			1.00 H	182	75.30	31.30
2	*2437.00	95.9 AV			1.00 H	182	64.60	31.30
3	4874.00	52.4 PK	74.0	-21.6	1.26 H	146	15.40	37.00
4	4874.00	37.1 AV	54.0	-16.9	1.26 H	146	0.10	37.00
5	7311.00	51.2 PK	74.0	-22.8	1.00 H	30	8.10	43.10
6	7311.00	38.2 AV	54.0	-15.8	1.00 H	30	-4.90	43.10
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	*2437.00	109.2 PK			1.28 V	245	77.90	31.30
2	*2437.00	98.0 AV			1.28 V	245	66.70	31.30
3	4874.00	53.1 PK	74.0	-20.9	1.00 V	230	16.10	37.00
4	4874.00	37.8 AV	54.0	-16.2	1.00 V	230	0.80	37.00
5	7311.00	51.4 PK	74.0	-22.6	1.00 V	25	8.30	43.10
6	7311.00	38.4 AV	54.0	-15.6	1.00 V	25	-4.70	43.10

- 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.

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	99.8 PK			1.00 H	182	68.40	31.40
2	*2462.00	88.7 AV			1.00 H	182	57.30	31.40
3	2483.50	59.9 PK	74.0	-14.1	1.19 H	146	28.50	31.40
4	2483.50	45.5 AV	54.0	-8.5	1.19 H	146	14.10	31.40
5	4924.00	45.6 PK	74.0	-28.4	1.00 H	285	8.50	37.10
6	4924.00	32.9 AV	54.0	-21.1	1.00 H	285	-4.20	37.10
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	*2462.00	103.4 PK			1.00 V	245	72.00	31.40
2	*2462.00	91.8 AV			1.00 V	245	60.40	31.40
3	2483.50	68.1 PK	74.0	-5.9	1.05 V	195	36.70	31.40
4	2483.50	52.8 AV	54.0	-1.2	1.05 V	195	21.40	31.40
5	4924.00	44.5 PK	74.0	-29.5	1.00 V	23	7.40	37.10
6	4924.00	31.9 AV	54.0	-22.1	1.00 V	23	-5.20	37.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	1.40 H	39	40.40	31.10
2	2390.00	53.1 AV	54.0	-0.9	1.40 H	39	22.00	31.10
3	*2412.00	105.2 PK			1.17 H	22	74.00	31.20
4	*2412.00	93.7 AV			1.17 H	22	62.50	31.20
5	4824.00	45.5 PK	74.0	-28.5	1.00 H	22	8.60	36.90
6	4824.00	32.8 AV	54.0	-21.2	1.00 H	22	-4.10	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.5	1.00 V	0	36.40	31.10
2	2390.00	47.8 AV	54.0	-6.2	1.00 V	0	16.70	31.10
3	*2412.00	103.0 PK			1.00 V	360	71.80	31.20
4	*2412.00	91.6 AV			1.00 V	360	60.40	31.20
5	4824.00	45.8 PK	74.0	-28.2	1.00 V	65	8.90	36.90
6	4824.00	33.1 AV	54.0	-20.9	1.00 V	65	-3.80	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	110.9 PK			1.38 H	27	79.60	31.30
2	*2437.00	99.8 AV			1.38 H	27	68.50	31.30
3	4874.00	51.8 PK	74.0	-22.2	1.10 H	356	14.80	37.00
4	4874.00	36.5 AV	54.0	-17.5	1.10 H	356	-0.50	37.00
5	7311.00	50.4 PK	74.0	-23.6	1.00 H	30	7.30	43.10
6	7311.00	38.5 AV	54.0	-15.5	1.00 H	30	-4.60	43.10
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	*2437.00	108.7 PK			1.00 V	337	77.40	31.30
2	*2437.00	97.3 AV			1.00 V	337	66.00	31.30
3	4874.00	52.1 PK	74.0	-21.9	1.00 V	7	15.10	37.00
4	4874.00	35.8 AV	54.0	-18.2	1.00 V	7	-1.20	37.00
5	7311.00	51.7 PK	74.0	-22.3	1.00 V	20	8.60	43.10
6	7311.00	38.5 AV	54.0	-15.5	1.00 V	20	-4.60	43.10

- 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.

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	106.5 PK			1.31 H	288	75.10	31.40
2	*2462.00	95.4 AV			1.31 H	288	64.00	31.40
3	2483.50	67.1 PK	74.0	-6.9	1.28 H	282	35.70	31.40
4	2483.50	52.0 AV	54.0	-2.0	1.28 H	282	20.60	31.40
5	4924.00	45.8 PK	74.0	-28.2	1.00 H	156	8.70	37.10
6	4924.00	33.2 AV	54.0	-20.8	1.00 H	156	-3.90	37.10
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	*2462.00	104.3 PK			1.00 V	351	72.90	31.40
2	*2462.00	92.3 AV			1.00 V	351	60.90	31.40
3	2483.50	66.1 PK	74.0	-7.9	1.00 V	333	34.70	31.40
4	2483.50	50.3 AV	54.0	-3.7	1.00 V	333	18.90	31.40
5	4924.00	45.6 PK	74.0	-28.4	1.00 V	285	8.50	37.10
6	4924.00	32.9 AV	54.0	-21.1	1.00 V	285	-4.20	37.10

- 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.

802.11n (40MHz)

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	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	66.8 PK	74.0	-7.2	1.00 H	182	35.70	31.10
2	2390.00	50.6 AV	54.0	-3.4	1.00 H	182	19.50	31.10
3	*2422.00	98.2 PK			1.00 H	180	67.00	31.20
4	*2422.00	86.8 AV			1.00 H	180	55.60	31.20
5	4844.00	45.5 PK	74.0	-28.5	1.00 H	152	8.60	36.90
6	4844.00	33.4 AV	54.0	-20.6	1.00 H	152	-3.50	36.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.9 PK	74.0	-4.1	1.03 V	246	38.80	31.10
2	2390.00	52.8 AV	54.0	-1.2	1.03 V	246	21.70	31.10
3	*2422.00	100.6 PK			1.00 V	247	69.40	31.20
4	*2422.00	89.0 AV			1.00 V	247	57.80	31.20
5	4844.00	45.3 PK	74.0	-28.7	1.00 V	123	8.40	36.90
6	4844.00	33.1 AV	54.0	-20.9	1.00 V	123	-3.80	36.90

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	63.2 PK	74.0	-10.8	1.00 H	181	32.10	31.10
2	2390.00	47.7 AV	54.0	-6.3	1.00 H	181	16.60	31.10
3	*2437.00	101.5 PK			1.00 H	181	70.20	31.30
4	*2437.00	89.1 AV			1.00 H	181	57.80	31.30
5	2483.50	63.3 PK	74.0	-10.7	1.19 H	146	31.90	31.40
6	2483.50	46.1 AV	54.0	-7.9	1.19 H	146	14.70	31.40
7	4874.00	45.5 PK	74.0	-28.5	1.00 H	147	8.50	37.00
8	4874.00	32.8 AV	54.0	-21.2	1.00 H	147	-4.20	37.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.04 V	245	33.80	31.10
2	2390.00	50.2 AV	54.0	-3.8	1.04 V	245	19.10	31.10
3	*2437.00	102.2 PK			1.08 V	193	70.90	31.30
4	*2437.00	91.0 AV			1.08 V	193	59.70	31.30
5	2483.50	70.7 PK	74.0	-3.3	1.06 V	193	39.30	31.40
6	2483.50	53.1 AV	54.0	-0.9	1.06 V	193	21.70	31.40
7	4874.00	45.5 PK	74.0	-28.5	1.00 V	85	8.50	37.00
8	4874.00	32.9 AV	54.0	-21.1	1.00 V	85	-4.10	37.00

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	94.9 PK			1.00 H	183	63.60	31.30
2	*2452.00	83.6 AV			1.00 H	183	52.30	31.30
3	2483.50	61.8 PK	74.0	-12.2	1.19 H	147	30.40	31.40
4	2483.50	46.0 AV	54.0	-8.0	1.19 H	147	14.60	31.40
5	4904.00	45.4 PK	74.0	-28.6	1.00 H	30	8.40	37.00
6	4904.00	32.6 AV	54.0	-21.4	1.00 H	30	-4.40	37.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	97.7 PK			1.00 V	246	66.40	31.30
2	*2452.00	86.3 AV			1.00 V	246	55.00	31.30
3	2483.50	68.7 PK	74.0	-5.3	1.06 V	193	37.30	31.40
4	2483.50	52.9 AV	54.0	-1.1	1.06 V	193	21.50	31.40
5	4904.00	45.5 PK	74.0	-28.5	1.00 V	25	8.50	37.00
6	4904.00	32.9 AV	54.0	-21.1	1.00 V	25	-4.10	37.00

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

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	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	64.6 PK	74.0	-9.4	1.45 H	25	33.50	31.10
2	2390.00	51.5 AV	54.0	-2.5	1.45 H	25	20.40	31.10
3	*2422.00	98.3 PK			1.18 H	23	67.10	31.20
4	*2422.00	87.1 AV			1.18 H	23	55.90	31.20
5	4844.00	45.8 PK	74.0	-28.2	1.00 H	78	8.90	36.90
6	4844.00	33.1 AV	54.0	-20.9	1.00 H	78	-3.80	36.90

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.3 PK	74.0	-11.7	1.00 V	0	31.20	31.10
2	2390.00	48.9 AV	54.0	-5.1	1.00 V	0	17.80	31.10
3	*2422.00	96.7 PK			1.00 V	351	65.50	31.20
4	*2422.00	85.3 AV			1.00 V	351	54.10	31.20
5	4844.00	45.5 PK	74.0	-28.5	1.00 V	123	8.60	36.90
6	4844.00	32.8 AV	54.0	-21.2	1.00 V	123	-4.10	36.90

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	67.2 PK	74.0	-6.8	1.41 H	39	36.10	31.10
2	2390.00	52.9 AV	54.0	-1.1	1.41 H	39	21.80	31.10
3	*2437.00	104.3 PK			1.39 H	26	73.00	31.30
4	*2437.00	92.6 AV			1.39 H	26	61.30	31.30
5	2483.50	64.0 PK	74.0	-10.0	1.28 H	282	32.60	31.40
6	2483.50	48.0 AV	54.0	-6.0	1.28 H	282	16.60	31.40
7	4874.00	45.8 PK	74.0	-28.2	1.00 H	147	8.80	37.00
8	4874.00	32.8 AV	54.0	-21.2	1.00 H	147	-4.20	37.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.4 PK	74.0	-8.6	1.00 V	0	34.30	31.10
2	2390.00	47.9 AV	54.0	-6.1	1.00 V	0	16.80	31.10
3	*2437.00	101.7 PK			1.00 V	336	70.40	31.30
4	*2437.00	90.4 AV			1.00 V	336	59.10	31.30
5	2483.50	63.1 PK	74.0	-10.9	1.00 V	334	31.70	31.40
6	2483.50	46.8 AV	54.0	-7.2	1.00 V	334	15.40	31.40
7	4874.00	45.5 PK	74.0	-28.5	1.00 V	195	8.50	37.00
8	4874.00	33.2 AV	54.0	-20.8	1.00 V	195	-3.80	37.00

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	99.6 PK			1.40 H	26	68.30	31.30
2	*2452.00	88.2 AV			1.40 H	26	56.90	31.30
3	2483.50	65.1 PK	74.0	-8.9	1.46 H	281	33.70	31.40
4	2483.50	48.9 AV	54.0	-5.1	1.46 H	281	17.50	31.40
5	4904.00	45.5 PK	74.0	-28.5	1.00 H	254	8.50	37.00
6	4904.00	32.9 AV	54.0	-21.1	1.00 H	254	-4.10	37.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	97.6 PK			1.00 V	347	66.30	31.30
2	*2452.00	85.8 AV			1.00 V	347	54.50	31.30
3	2483.50	63.4 PK	74.0	-10.6	1.00 V	0	32.00	31.40
4	2483.50	46.9 AV	54.0	-7.1	1.00 V	0	15.50	31.40
5	4904.00	45.5 PK	74.0	-28.5	1.00 V	147	8.50	37.00
6	4904.00	32.9 AV	54.0	-21.1	1.00 V	147	-4.10	37.00

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



BELOW 1GHz WORST-CASE DATA : 802.11g

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, 65%RH	TEST MODE	A
TESTED BY	Match Tsui		

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	119.34	40.8 QP	43.5	-2.7	1.50 H	10	28.30	12.50
2	134.89	38.9 QP	43.5	-4.6	2.50 H	331	25.20	13.70
3	175.72	32.0 QP	43.5	-11.5	2.00 H	352	19.20	12.80
4	214.61	33.4 QP	43.5	-10.1	1.50 H	340	22.30	11.10
5	239.88	43.9 QP	46.0	-2.1	1.00 H	337	31.40	12.50
6	720.12	35.5 QP	46.0	-10.5	2.00 H	250	11.20	24.30
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	39.62	30.1 QP	40.0	-9.9	1.00 V	280	15.80	14.30
2	99.89	33.7 QP	43.5	-9.8	1.00 V	151	23.50	10.20
3	134.89	34.0 QP	43.5	-9.5	1.00 V	307	20.30	13.70
4	239.88	34.9 QP	46.0	-11.1	1.50 V	271	22.40	12.50
5	500.42	34.5 QP	46.0	-11.5	1.00 V	193	14.30	20.20
6	830.95	35.1 QP	46.0	-10.9	1.50 V	13	9.30	25.80

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

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, 65%RH	TEST MODE	B
TESTED BY	Match Tsui		

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	94.06	33.0 QP	43.5	-10.5	2.00 H	169	23.80	9.20
2	107.67	40.0 QP	43.5	-3.5	2.50 H	10	28.90	11.10
3	132.95	36.6 QP	43.5	-6.9	2.00 H	349	23.10	13.50
4	175.72	32.0 QP	43.5	-11.5	2.00 H	7	19.20	12.80
5	239.88	42.8 QP	46.0	-3.2	1.00 H	346	30.30	12.50
6	720.12	36.4 QP	46.0	-9.6	1.00 H	244	12.10	24.30
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	41.57	30.5 QP	40.0	-9.5	1.00 V	10	16.10	14.40
2	84.34	28.8 QP	40.0	-11.2	1.00 V	94	19.90	8.90
3	103.78	31.2 QP	43.5	-12.3	1.00 V	121	20.50	10.70
4	239.88	34.3 QP	46.0	-11.7	1.50 V	268	21.80	12.50
5	500.42	35.1 QP	46.0	-10.9	1.00 V	181	14.90	20.20
6	832.89	34.1 QP	46.0	-11.9	2.50 V	274	8.30	25.80

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:** 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 23, 2010	Nov. 22, 2011
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 30, 2010	Dec. 29, 2011
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

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

4.2.3 TEST PROCEDURES

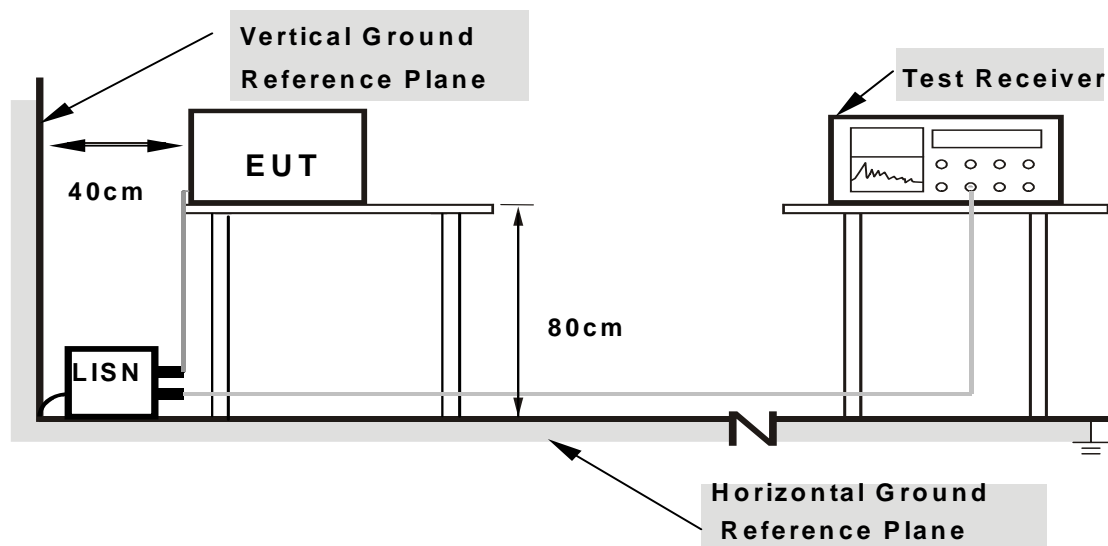
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

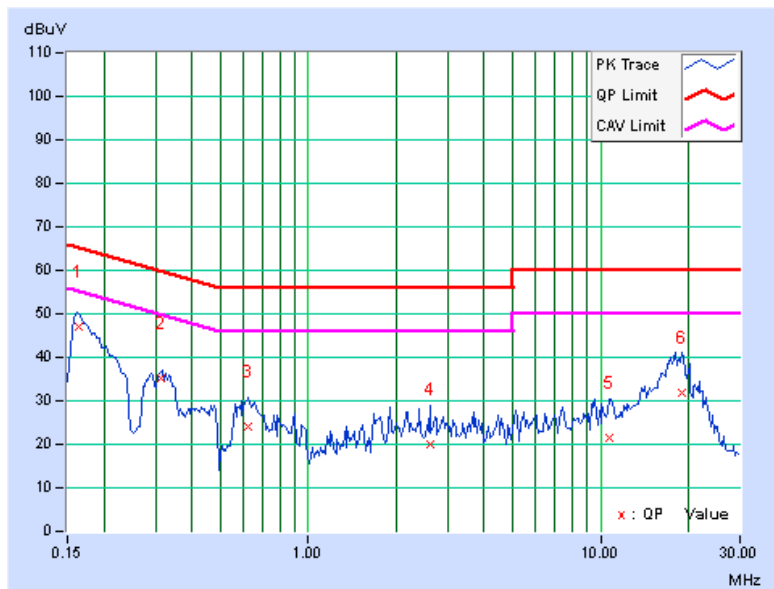
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11g

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.164	0.12	47.00	-	47.12	-	65.25	55.25	-18.13	-
2	0.314	0.12	35.06	-	35.18	-	59.86	49.86	-24.68	-
3	0.623	0.13	24.12	-	24.25	-	56.00	46.00	-31.75	-
4	2.621	0.23	19.62	-	19.85	-	56.00	46.00	-36.15	-
5	10.703	0.69	20.64	-	21.33	-	60.00	50.00	-38.67	-
6	19.043	1.07	30.87	-	31.94	-	60.00	50.00	-28.06	-

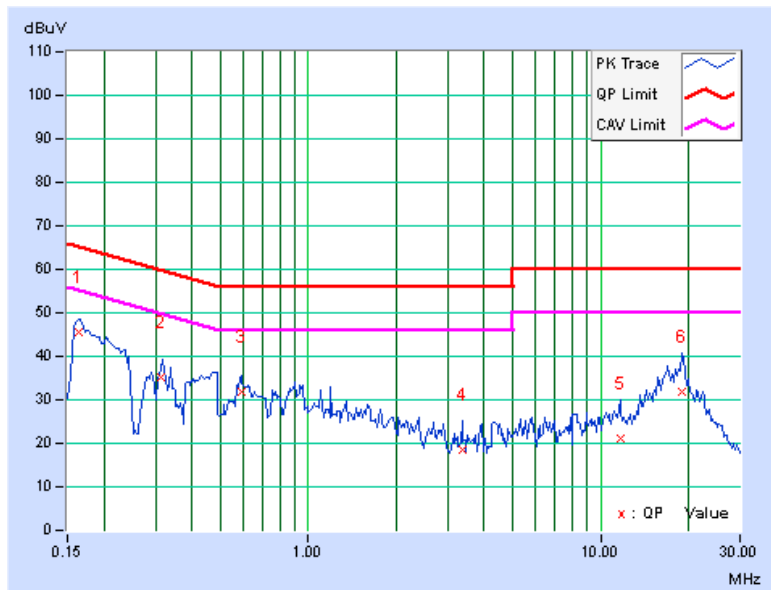
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.164	0.13	45.47	-	45.60	-	65.24	55.24	-19.65	-
2	0.312	0.14	35.01	-	35.15	-	59.93	49.93	-24.78	-
3	0.591	0.15	31.71	-	31.86	-	56.00	46.00	-24.14	-
4	3.359	0.28	18.24	-	18.52	-	56.00	46.00	-37.48	-
5	11.684	0.66	20.62	-	21.28	-	60.00	50.00	-38.72	-
6	19.027	0.89	30.85	-	31.74	-	60.00	50.00	-28.26	-

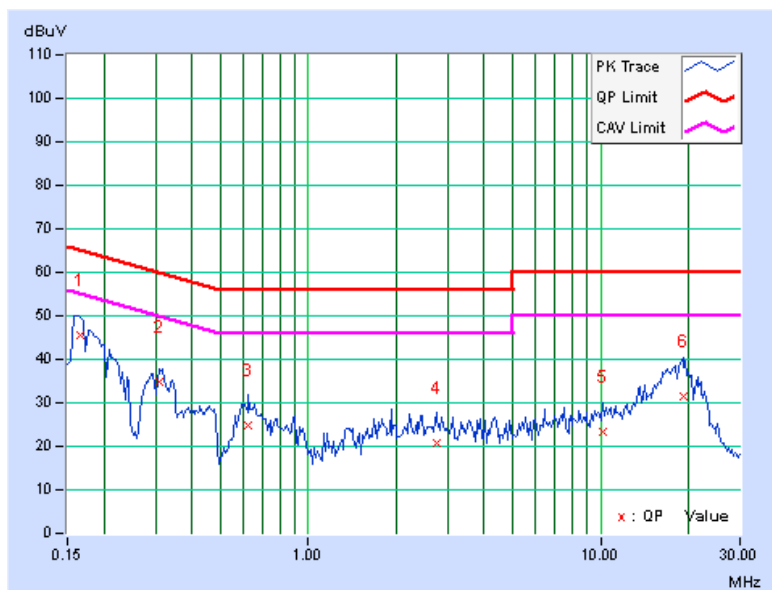
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.12	45.30	-	45.42	-	65.18	55.18	-19.76	-
2	0.310	0.12	34.61	-	34.73	-	59.97	49.97	-25.24	-
3	0.620	0.13	24.68	-	24.81	-	56.00	46.00	-31.19	-
4	2.742	0.23	20.54	-	20.77	-	56.00	46.00	-35.23	-
5	10.206	0.67	22.74	-	23.41	-	60.00	50.00	-36.59	-
6	19.113	1.08	30.52	-	31.60	-	60.00	50.00	-28.40	-

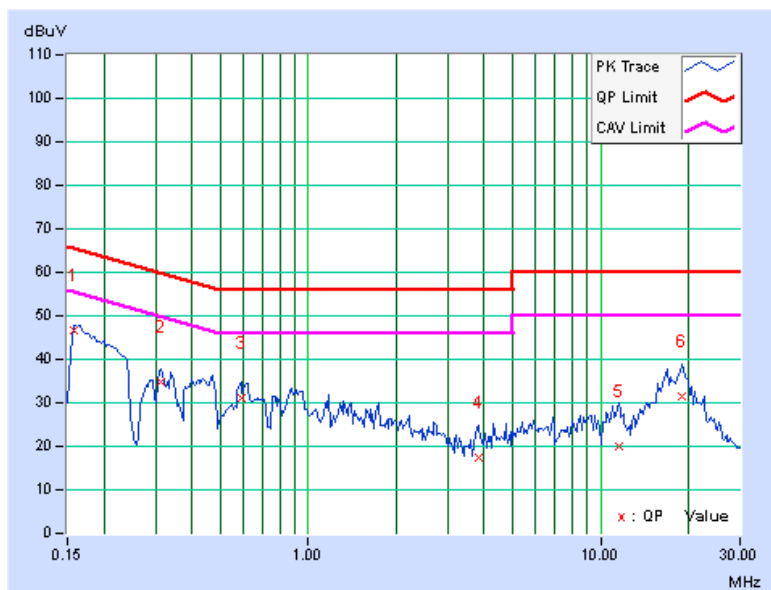
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.13	46.43	-	46.56	-	65.58	55.58	-19.02	-
2	0.314	0.14	34.53	-	34.67	-	59.86	49.86	-25.20	-
3	0.591	0.15	30.89	-	31.04	-	56.00	46.00	-24.96	-
4	3.824	0.31	16.94	-	17.25	-	56.00	46.00	-38.75	-
5	11.512	0.65	19.25	-	19.90	-	60.00	50.00	-40.10	-
6	19.031	0.89	30.68	-	31.57	-	60.00	50.00	-28.43	-

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

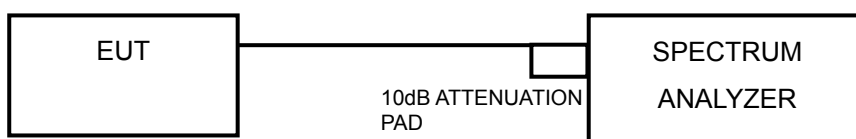


4.3 6dB BANDWIDTH MEASUREMENT

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

1. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. 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

TEST MODE A

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.28	0.5	PASS
6	2437	12.26	0.5	PASS
11	2462	12.27	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.49	0.5	PASS
6	2437	16.55	0.5	PASS
11	2462	16.64	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.84	0.5	PASS
6	2437	17.82	0.5	PASS
11	2462	17.82	0.5	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.85	0.5	PASS
4	2437	36.78	0.5	PASS
7	2452	36.74	0.5	PASS

TEST MODE B

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.26	0.5	PASS
6	2437	12.25	0.5	PASS
11	2462	12.26	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.53	0.5	PASS
6	2437	16.56	0.5	PASS
11	2462	16.57	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.80	0.5	PASS
6	2437	17.81	0.5	PASS
11	2462	17.80	0.5	PASS

802.11n (40MHz)

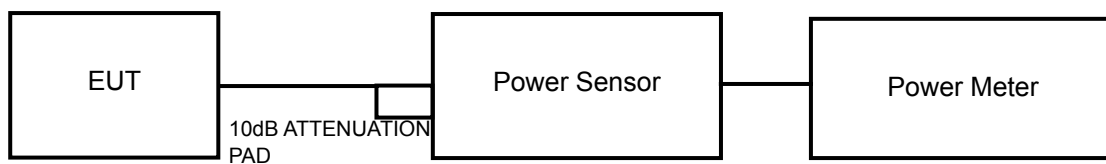
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.47	0.5	PASS
4	2437	36.50	0.5	PASS
7	2452	36.90	0.5	PASS

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

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

TEST MODE A

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	50.1	17.0	30	PASS
6	2437	107.2	20.3	30	PASS
11	2462	64.6	18.1	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	218.8	23.4	30	PASS
6	2437	363.1	25.6	30	PASS
11	2462	199.5	23.0	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	199.5	23.0	30	PASS
6	2437	338.8	25.3	30	PASS
11	2462	102.3	20.1	30	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2422	141.3	21.5	30	PASS
4	2437	169.8	22.3	30	PASS
7	2452	69.2	18.4	30	PASS

TEST MODE B

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	97.7	19.9	30	PASS
6	2437	107.2	20.3	30	PASS
11	2462	89.1	19.5	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	131.8	21.2	30	PASS
6	2437	363.1	25.6	30	PASS
11	2462	158.5	22.0	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	109.6	20.4	30	PASS
6	2437	338.8	25.3	30	PASS
11	2462	173.8	22.4	30	PASS

802.11n (40MHz)

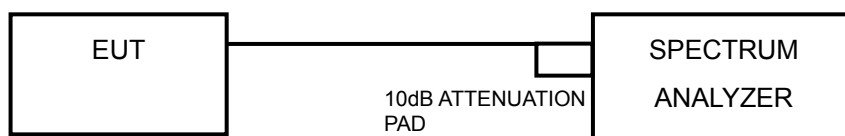
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2422	66.1	18.2	30	PASS
4	2437	169.8	22.3	30	PASS
7	2452	74.1	18.7	30	PASS

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

1. Set the RBW = 100 kHz, VBW = 300 kHz, Detector = peak.
2. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
3. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
4. 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 $BWCF = 10\log(3 \text{ kHz}/100\text{kHz})$

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

TEST MODE A

802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	5.07	-10.16	8	PASS
6	2437	8.37	-6.86	8	PASS
11	2462	6.08	-9.15	8	PASS

802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.26	-11.97	8	PASS
6	2437	5.36	-9.87	8	PASS
11	2462	3.00	-12.23	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.04	-12.19	8	PASS
6	2437	5.43	-9.80	8	PASS
11	2462	0.02	-15.21	8	PASS

802.11n (40MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2422	0.02	-15.21	8	PASS
4	2437	0.89	-14.34	8	PASS
7	2452	-3.20	-18.43	8	PASS

TEST MODE B

802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	8.07	-7.16	8	PASS
6	2437	8.34	-6.89	8	PASS
11	2462	7.64	-7.59	8	PASS

802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	0.89	-14.34	8	PASS
6	2437	5.38	-9.85	8	PASS
11	2462	1.82	-13.41	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	0.19	-15.04	8	PASS
6	2437	5.15	-10.08	8	PASS
11	2462	2.11	-13.12	8	PASS

802.11n (40MHz)

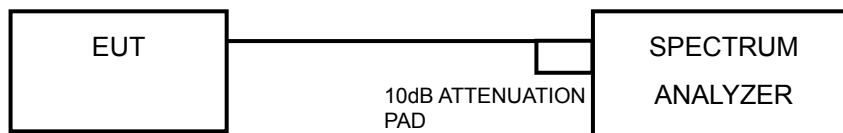
Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2422	-6.40	-21.63	8	PASS
4	2437	-2.07	-17.30	8	PASS
7	2452	-5.84	-21.07	8	PASS

4.6 CONDUCTED EMISSION MEASUREMENT

4.6.1 LIMITS OF BAND EDGES 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 \geq 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 \geq 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 $10\log(N)$ 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 in part 15.247(d).

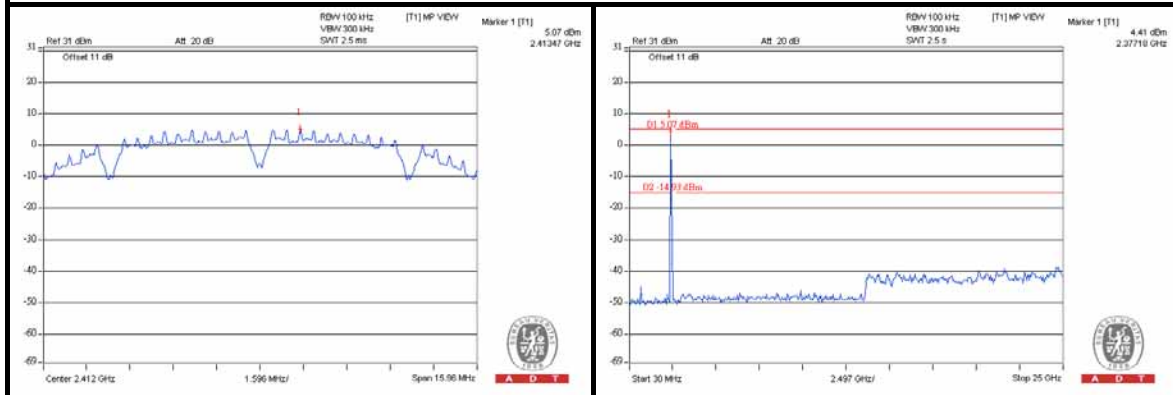


A D T

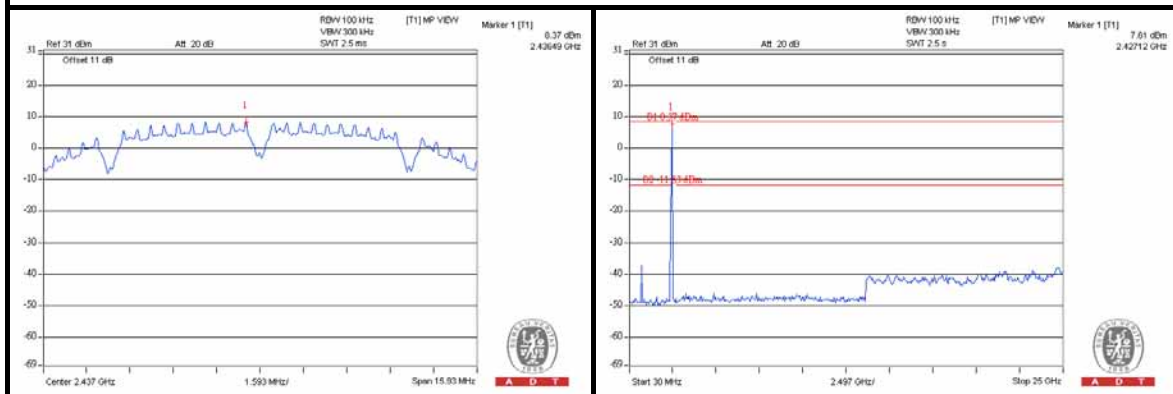
TEST MODE A

802.11b

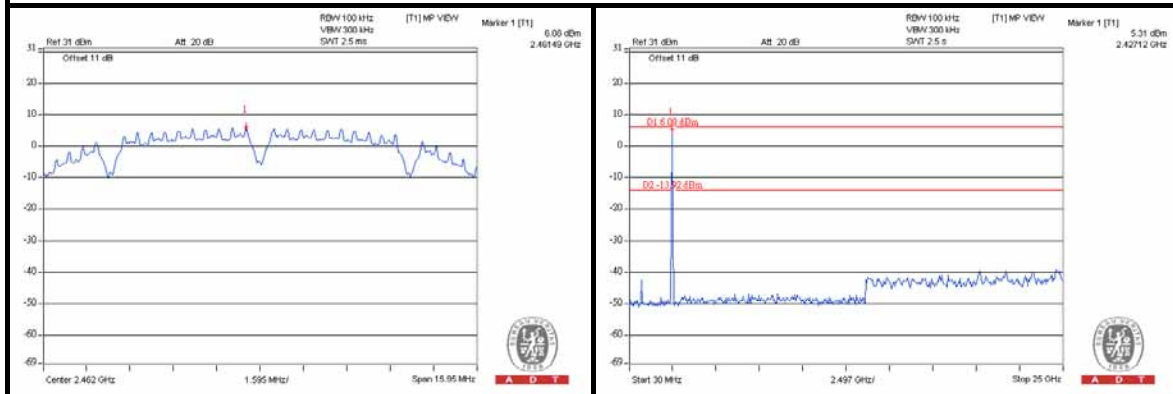
CH 1



CH 6



CH 11

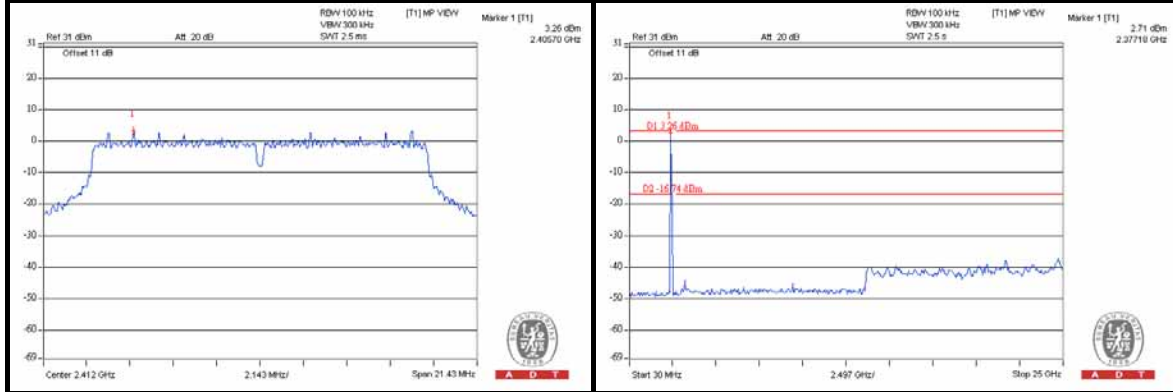




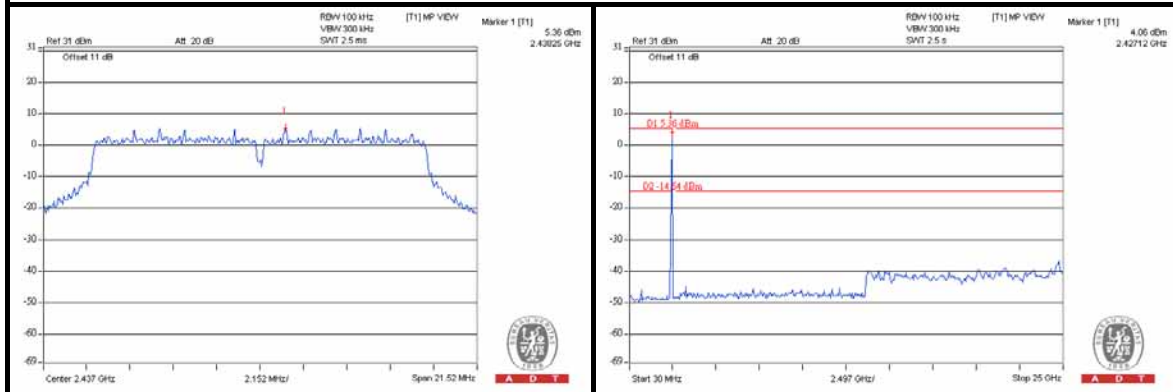
A D T

802.11g

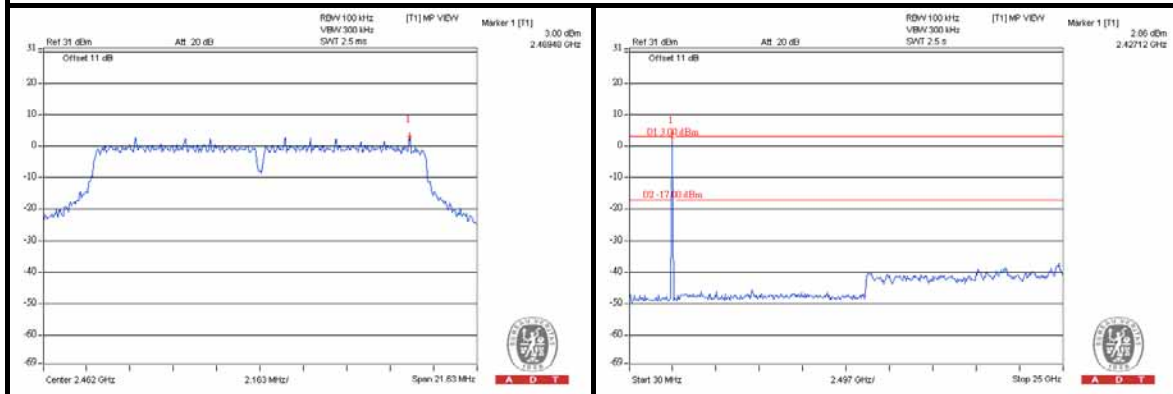
CH 1



CH 6



CH 11

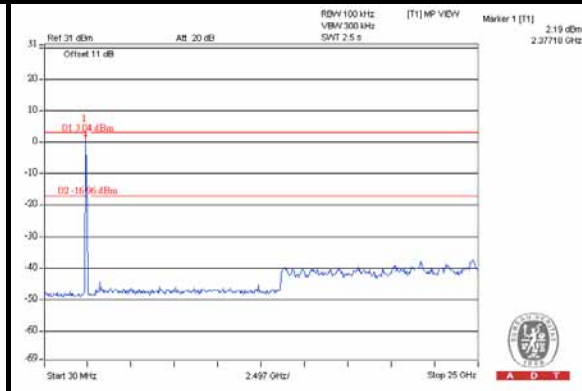
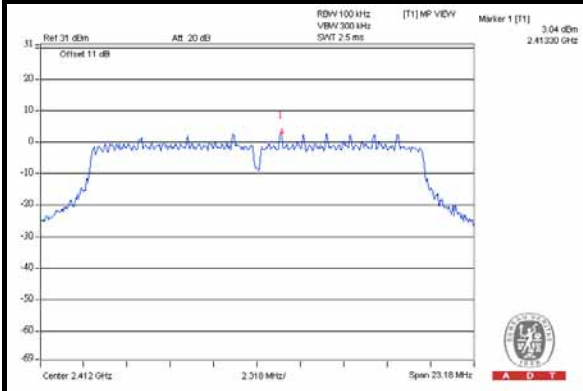




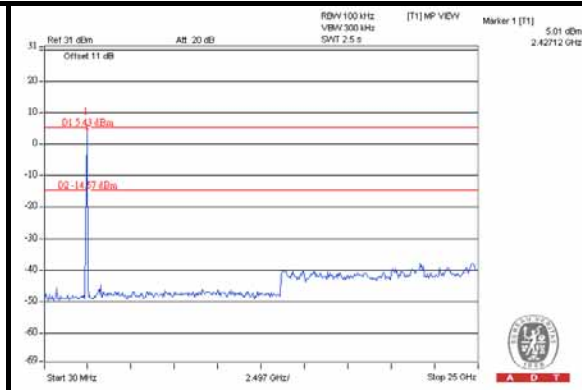
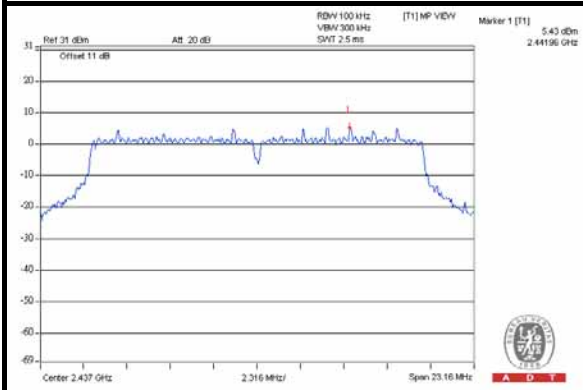
A D T

802.11n (20MHz)

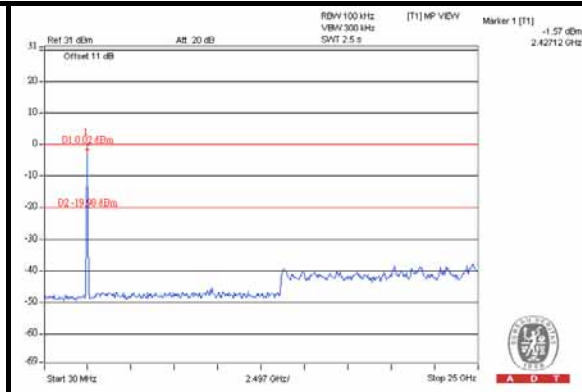
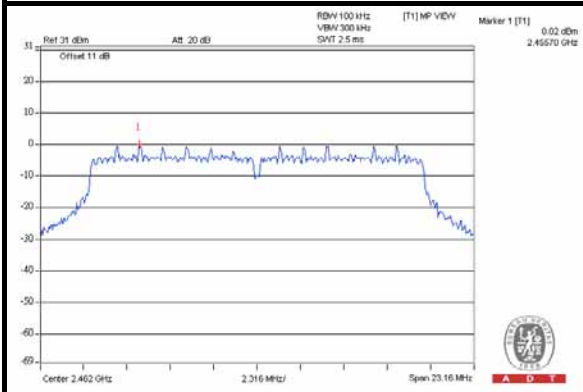
CH 1



CH 6



CH 11

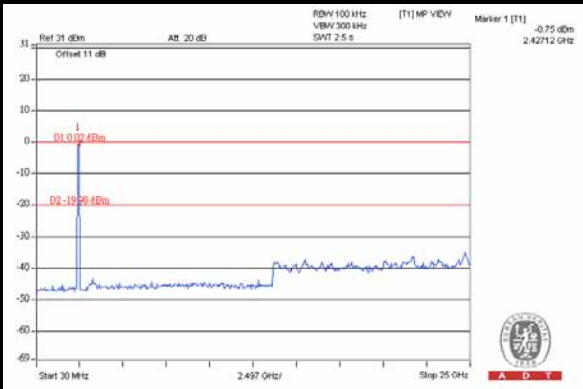
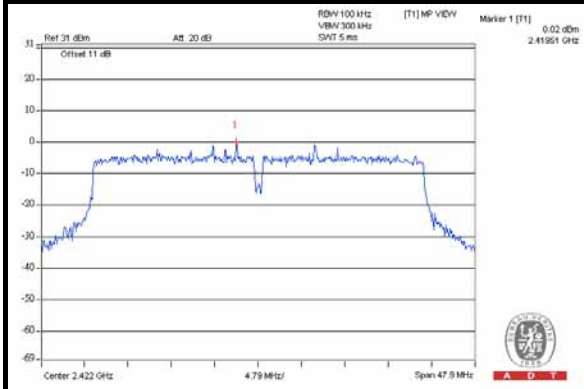




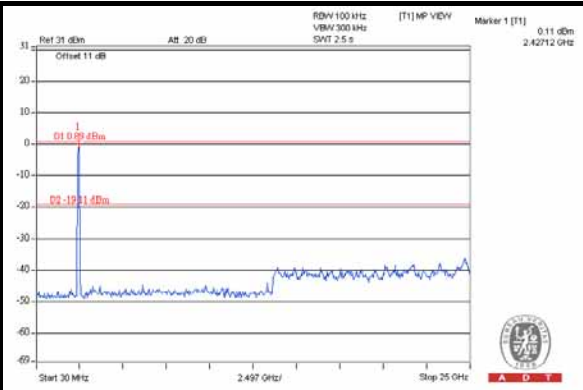
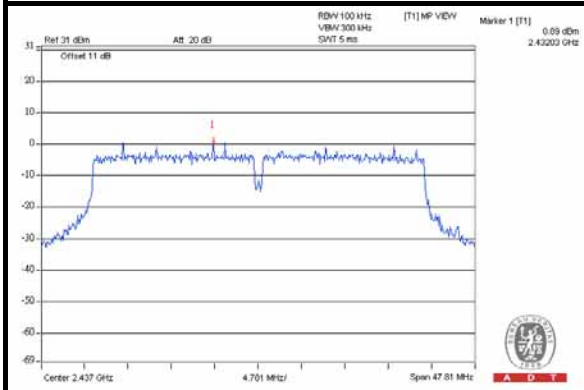
A D T

802.11n (40MHz)

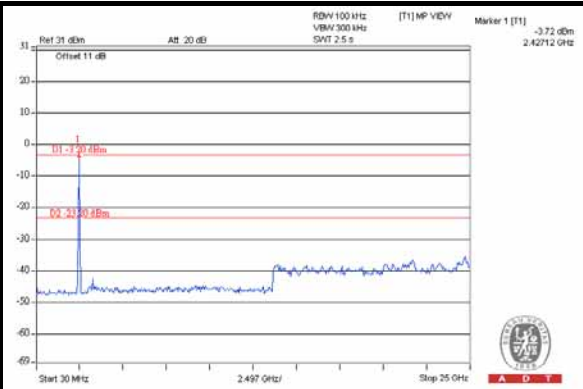
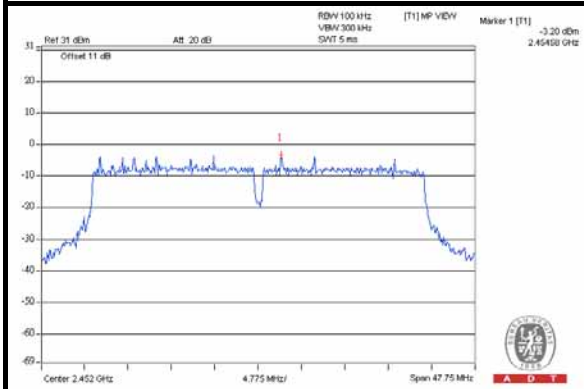
CH 1



CH 4



CH 7



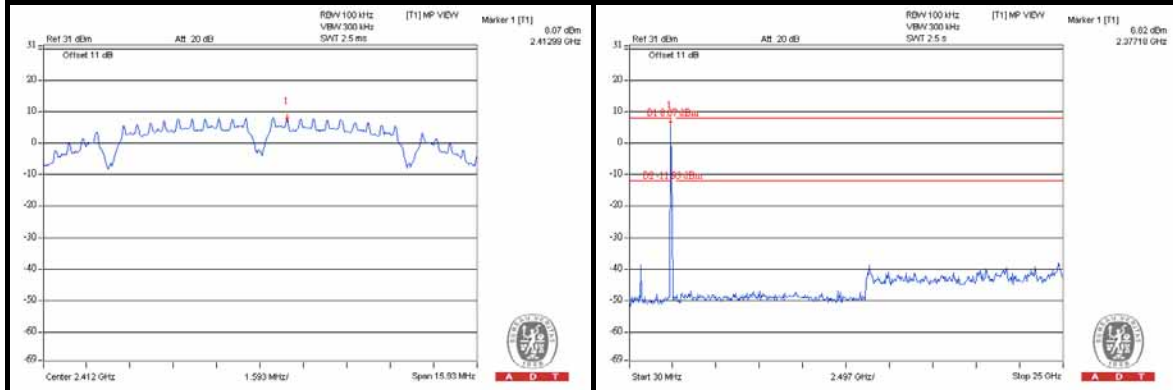


A D T

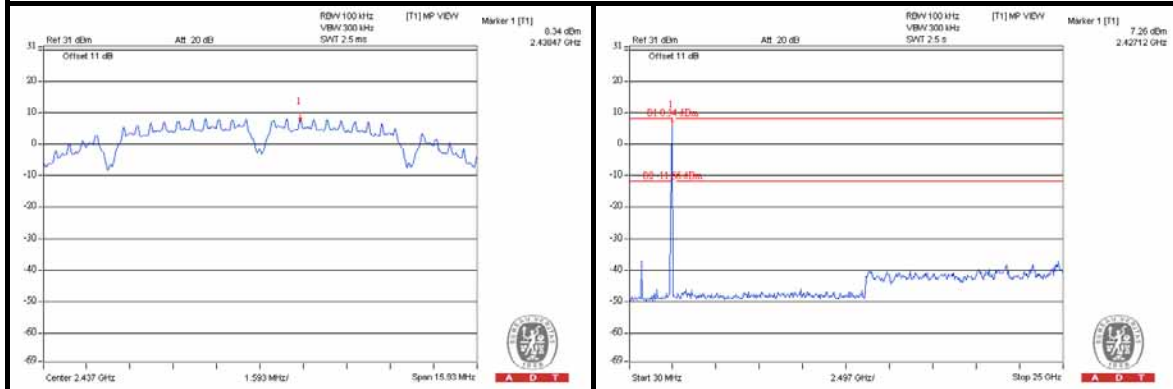
TEST MODE B

802.11b

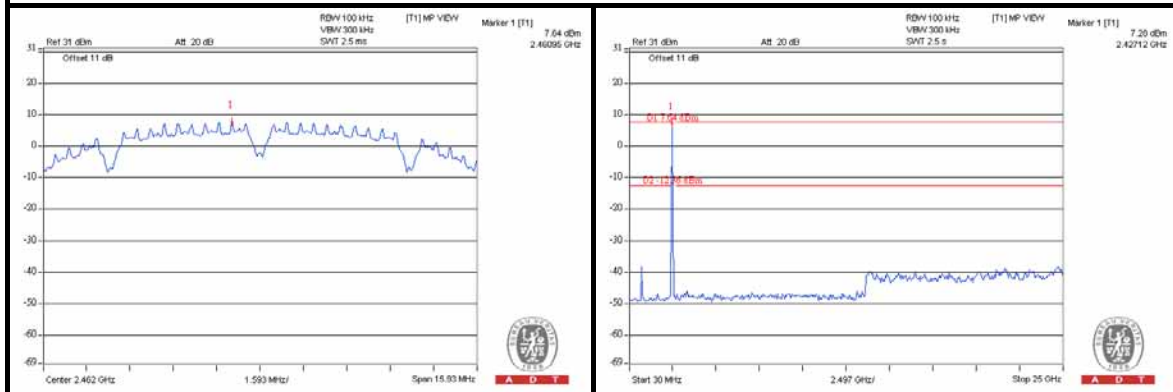
CH 1



CH 6



CH 11

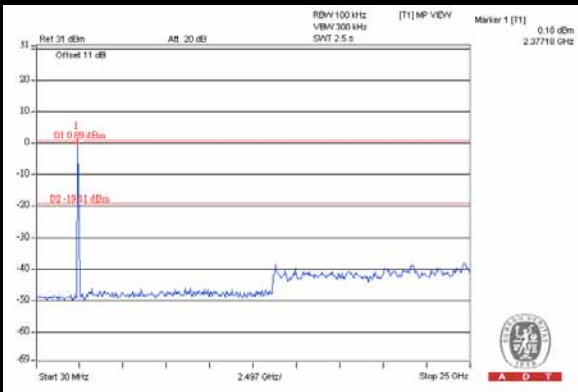
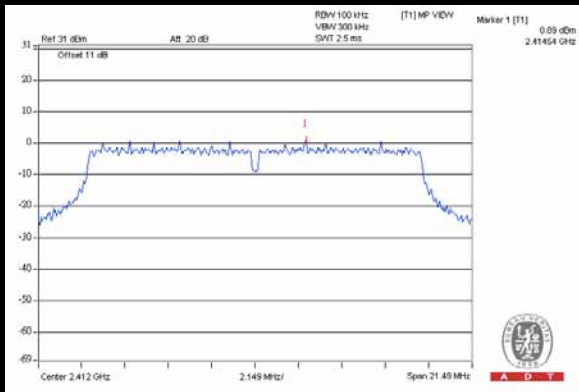




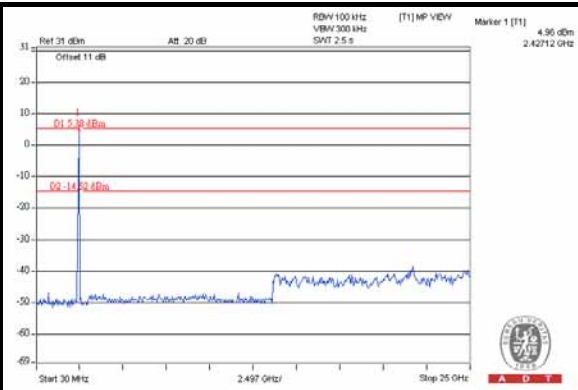
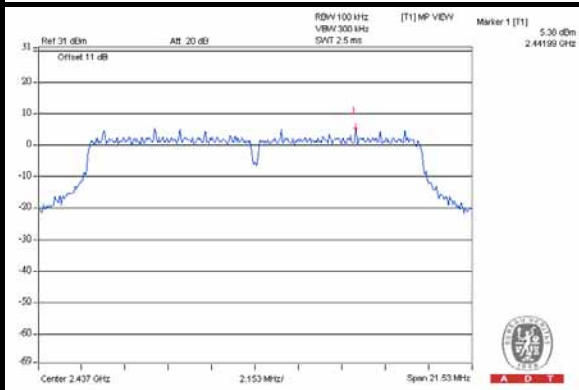
A D T

802.11g

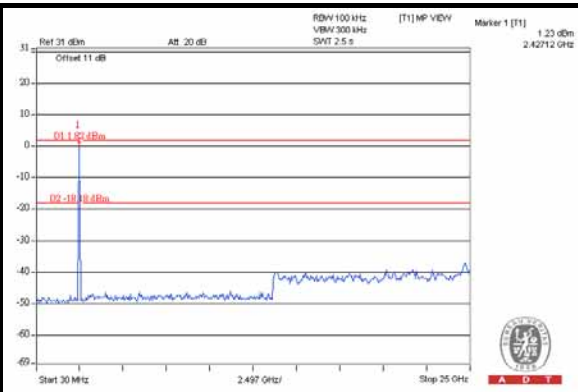
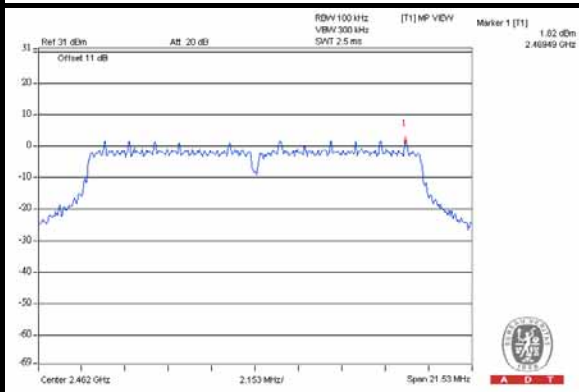
CH 1



CH 6



CH 11

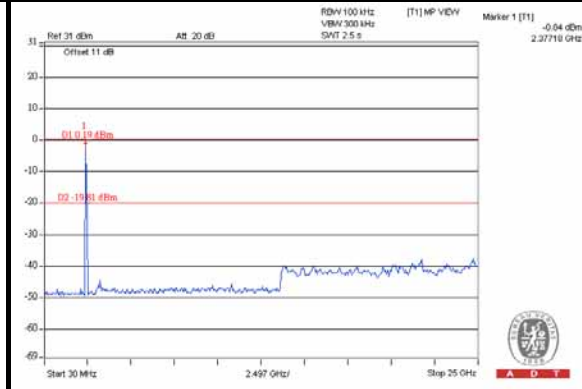
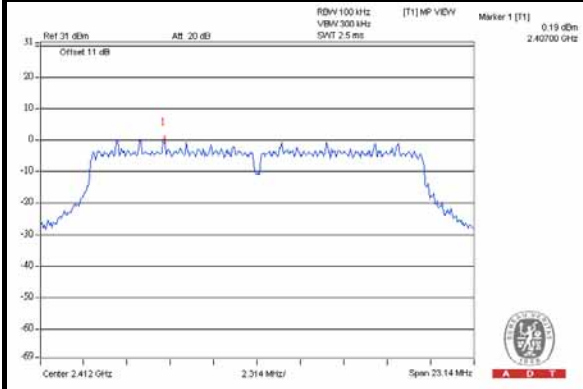




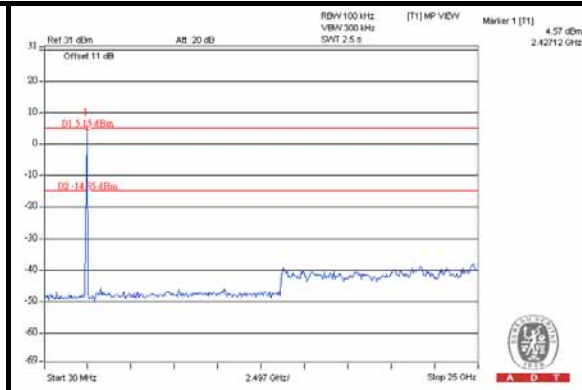
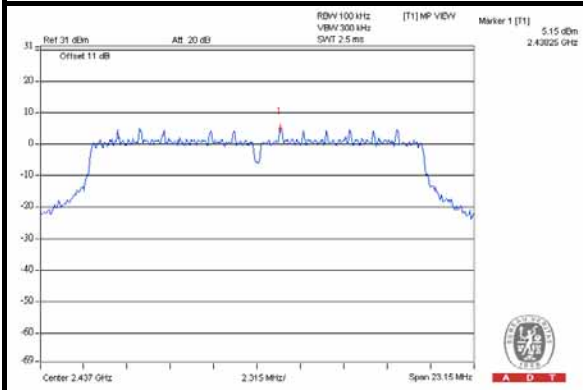
A D T

802.11n (20MHz)

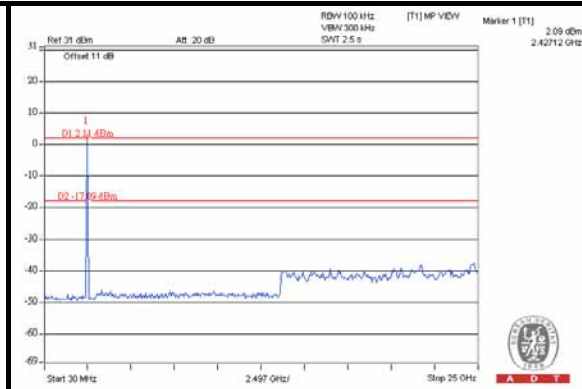
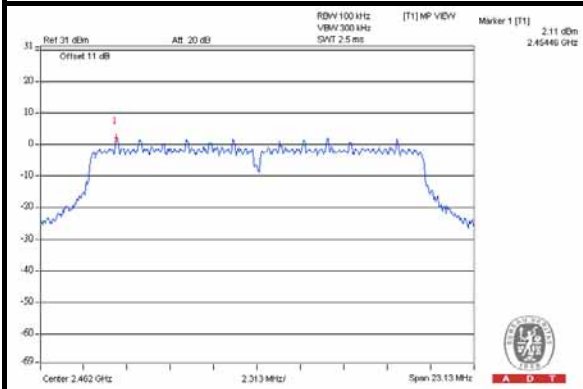
CH 1



CH 6



CH 11

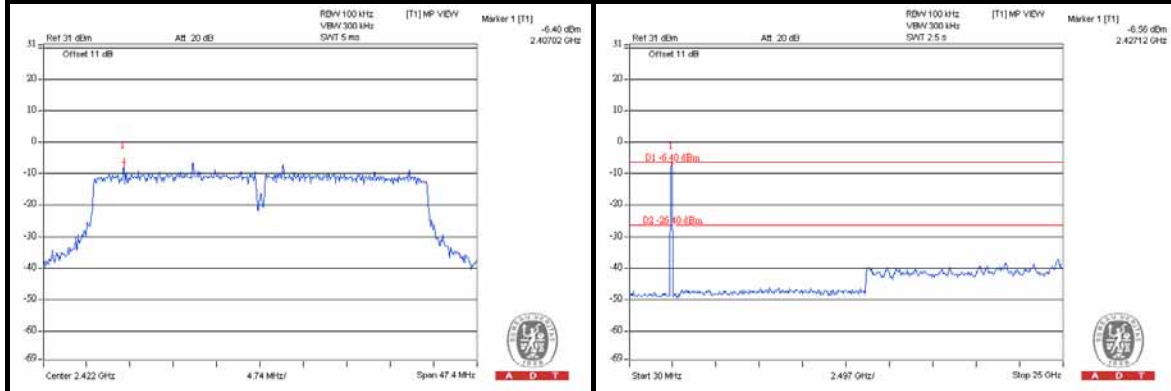




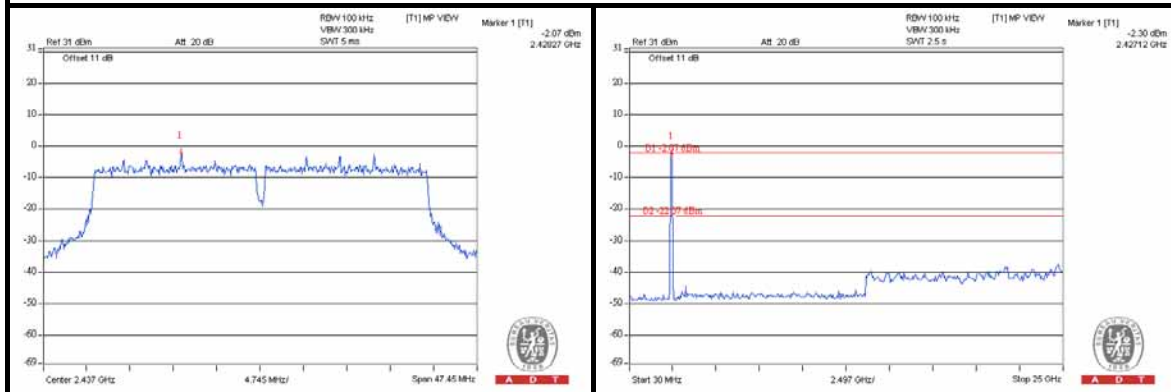
A D T

802.11n (40MHz)

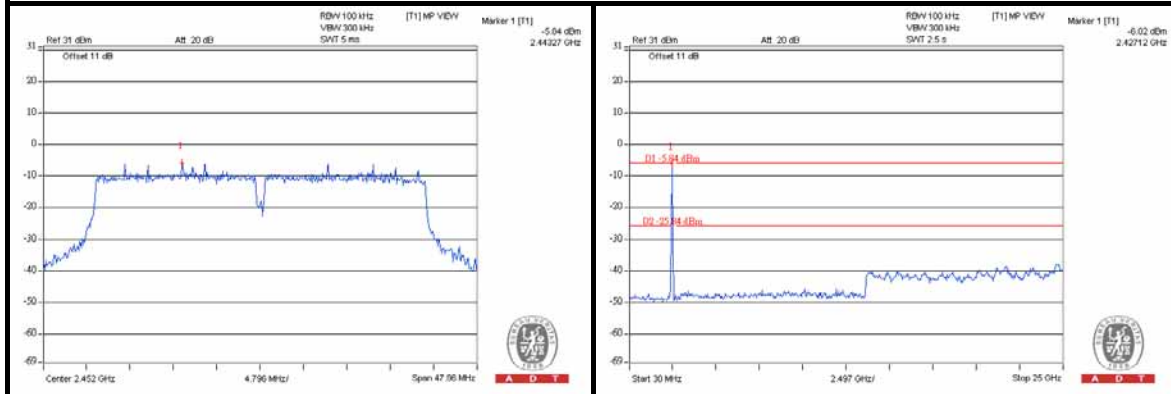
CH 1



CH 4



CH 7





5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

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



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

No any modifications are made to the EUT by the lab during the test.

---END---