FCC TEST REPORT

REPORT NO.:	RF110902C03F
MODEL NO.:	DAP-1360L
FCC ID:	KA2AP1360LA1
RECEIVED:	Aug. 04, 2011
TESTED:	Aug. 04, 2011 ~ Jul. 18, 2012
ISSUED:	Jul. 23, 2012

APPLICANT:	D-Link Corporation
ADDRESS:	17595 Mt. Herrmann, Fountain Valley, CA 92708, U.S.A.

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.

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF110902C03F	Original release	Jul. 23, 2012

1. CERTIFICATION

PRODUCT:	Wireless N300 Cloud Access Point
MODEL:	DAP-1360L
BRAND:	D-Link
APPLICANT:	D-Link Corporation
TESTED:	Aug. 04, 2011 ~ Jul. 18, 2012
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)**
	ANSI C63.10-2009

The above equipment (model: DAP-1360L) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , DATE : Jul. 23, 2012
Joanna Wang / Senior Specialist

APPROVED BY : _____ , DATE : Jul. 23, 2012
Gary Chang / Technical Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART 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 -13.38dB at 0.17344MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 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	Antenna connector is R-SMA not a standard connector.

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	2.44dB
Radiated emissions	30MHz ~ 200MHz	2.93dB
	200MHz ~1000MHz	2.95dB
	1GHz ~ 18GHz	2.26dB
	18GHz ~ 40GHz	1.94dB

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	Wireless N300 Cloud Access Point
MODEL NO.	DAP-1360L
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 300.0Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz)
OUTPUT POWER	613.4mW
ANTENNA TYPE	Dipole antenna with 2dBi gain
ANTENNA CONNECTOR	R-SMA
DATA CABLE	N/A
I/O PORTS	RJ45
ACCESSORY DEVICES	N/A

NOTE:

1. 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
802.11n (20MHz) MCS 0-7	1TX
802.11n (20MHz) MCS 8-15	2TX
802.11n (40MHz) MCS 0-7	1TX
802.11n (40MHz) MCS 8-15	2TX

2. The EUT was operated with following adapters:

ADAPTER 1	
BRAND:	D-Link
MODEL:	F05W-050100SPAU
INPUT:	100-240Vac, 50/60Hz, 190mA
OUTPUT:	5Vdc, 1.0A
POWER LINE:	1.2m non-shielded cable without core

ADAPTER 2	
BRAND:	D-Link
MODEL:	AMS47-0501000FU
INPUT:	100-240Vac, 50/60Hz, 0.2A / 15VA
OUTPUT:	5Vdc, 1.0A
POWER LINE:	1.5m non-shielded cable without core

3. The above EUT information is declared by manufacturer and for more detailed feature 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
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Adapter 1
B	-	√	√	-	Adapter 2

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

NOTE: "-" means no effect

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, 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)	TX FUNCTION
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	1TX
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	1TX
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	1TX
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	2TX
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0	1TX
A	802.11n (40MHz)	3 to 9	3, 6, 9	OFDM	BPSK	15.0	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX FUNCTION
A, B	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	7.2	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	TX FUNCTION
A, B	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	7.2	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.

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

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

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY	TESTED DATE
RE≥1G	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin	8/4 ~ 9/7/2011
RE<1G	23deg. C, 70%RH	120Vac, 60Hz	Sun Lin	4/20/2012
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anderson Hong	4/23/2012
APCM	23deg. C, 68%RH	120Vac, 60Hz	Aska Huang	7/18/2012

3.3 DESCRIPTION OF SUPPORT UNITS

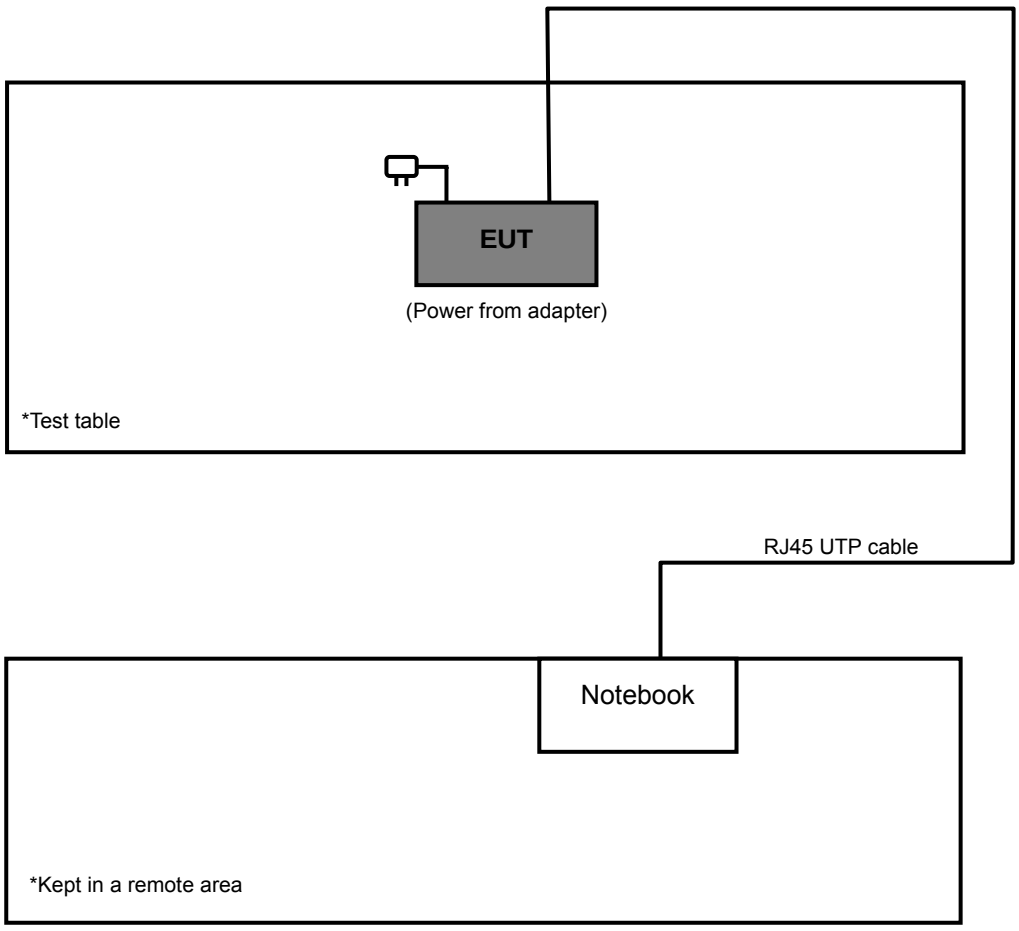
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	D531	CN-0XM006-48643 -81U-2610	QDS-BRCM1020

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m RJ45 UTP cable

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

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)
558074 D01 DTS Meas Guidance v01
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 MEASUREMENT

4.1.1 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.

4.1.2 TEST INSTRUMENTS

Tested Date: Aug. 04 ~ Sep. 07, 2011

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 06, 2011	Jan. 05, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01911	Nov. 03, 2010	Nov. 02, 2011
Preamplifier Agilent	8447D	2944A10638	Nov. 03, 2010	Nov. 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
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

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 9.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC 7450F-4.

Tested Date: Apr. 20, 2012

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	100040	Aug. 04, 2011	Aug. 03, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 03, 2012	Apr. 02, 2013
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
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. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
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

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 9.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 460141.

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

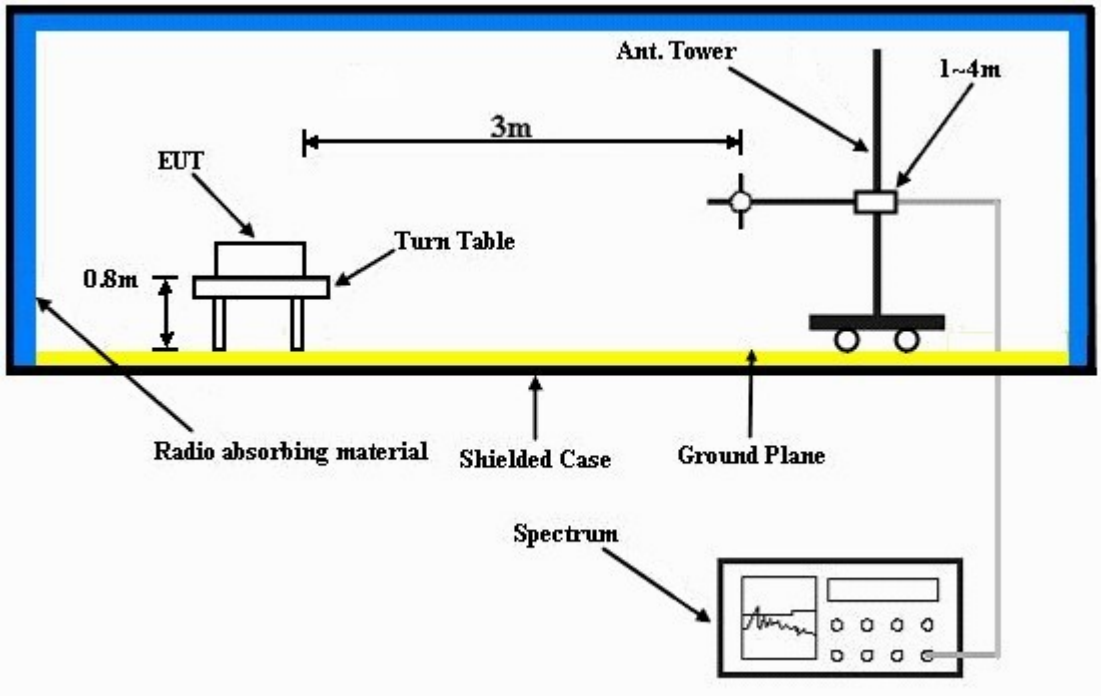
NOTE:

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 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. Placed the EUT on the testing table.

b. Prepared the notebook to act as communication partner and placed it outside of testing area.

c. The notebook ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

d. The necessary accessories enable the system in full functions.

4.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA：

802.11b: 1TX

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

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	2386.00	56.2 PK	74.0	-17.8	1.05 H	208	25.20	31.00
2	2386.00	46.1 AV	54.0	-7.9	1.05 H	208	15.10	31.00
3	*2412.00	105.9 PK			1.05 H	208	74.80	31.10
4	*2412.00	101.8 AV			1.05 H	208	70.70	31.10
5	4824.00	47.4 PK	74.0	-26.6	1.35 H	160	10.20	37.20
6	4824.00	40.6 AV	54.0	-13.4	1.35 H	160	3.40	37.20
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	2386.00	61.0 PK	74.0	-13.0	1.18 V	2	29.10	31.90
2	2386.00	52.7 AV	54.0	-1.3	1.18 V	2	20.80	31.90
3	*2412.00	111.4 PK			1.18 V	2	79.40	32.00
4	*2412.00	109.0 AV			1.18 V	2	77.00	32.00
5	4824.00	52.5 PK	74.0	-21.5	1.08 V	193	14.00	38.50
6	4824.00	48.9 AV	54.0	-5.1	1.08 V	193	10.40	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	105.3 PK			1.08 H	212	74.10	31.20
2	*2437.00	101.6 AV			1.08 H	212	70.40	31.20
3	4874.00	53.8 PK	74.0	-20.2	1.00 H	322	16.50	37.30
4	4874.00	50.2 AV	54.0	-3.8	1.00 H	322	12.90	37.30
5	7311.00	53.8 PK	74.0	-20.2	1.47 H	298	10.70	43.10
6	7311.00	49.2 AV	54.0	-4.8	1.47 H	298	6.10	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	111.0 PK			1.13 V	2	78.90	32.10
2	*2437.00	108.5 AV			1.13 V	2	76.40	32.10
3	4874.00	54.8 PK	74.0	-19.2	1.73 V	244	16.20	38.60
4	4874.00	52.6 AV	54.0	-1.4	1.73 V	244	14.00	38.60
5	7311.00	56.9 PK	74.0	-17.1	1.58 V	214	12.00	44.90
6	7311.00	50.2 AV	54.0	-3.8	1.58 V	214	5.30	44.90

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

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	105.0 PK			1.00 H	206	72.80	32.20
2	*2462.00	101.1 AV			1.00 H	206	68.90	32.20
3	2488.00	59.2 PK	74.0	-14.8	1.00 H	206	26.90	32.30
4	2488.00	51.5 AV	54.0	-2.5	1.00 H	206	19.20	32.30
5	4924.00	53.1 PK	74.0	-20.9	1.01 H	357	14.30	38.80
6	4924.00	49.9 AV	54.0	-4.1	1.01 H	357	11.10	38.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.6 PK			1.08 V	178	78.40	32.20
2	*2462.00	108.3 AV			1.08 V	178	76.10	32.20
3	2488.00	61.5 PK	74.0	-12.5	1.09 V	179	29.20	32.30
4	2488.00	52.6 AV	54.0	-1.4	1.09 V	179	20.30	32.30
5	4924.00	54.5 PK	74.0	-19.5	1.08 V	212	15.70	38.80
6	4924.00	51.5 AV	54.0	-2.5	1.08 V	212	12.70	38.80

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11g: 1TX

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

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	60.6 PK	74.0	-13.4	1.28 H	207	28.60	32.00
2	2390.00	47.2 AV	54.0	-6.8	1.28 H	207	15.20	32.00
3	*2412.00	103.3 PK			1.28 H	207	71.30	32.00
4	*2412.00	94.8 AV			1.28 H	207	62.80	32.00
5	4824.00	48.0 PK	74.0	-26.0	1.00 H	226	9.50	38.50
6	4824.00	37.3 AV	54.0	-16.7	1.00 H	226	-1.20	38.50
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	67.0 PK	74.0	-7.0	1.13 V	188	35.00	32.00
2	2390.00	52.3 AV	54.0	-1.7	1.13 V	188	20.30	32.00
3	*2412.00	108.9 PK			1.13 V	188	76.90	32.00
4	*2412.00	100.0 AV			1.13 V	188	68.00	32.00
5	4824.00	51.3 PK	74.0	-22.7	1.08 V	189	12.80	38.50
6	4824.00	44.8 AV	54.0	-9.2	1.08 V	189	6.30	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	106.7 PK			1.28 H	218	74.60	32.10
2	*2437.00	98.1 AV			1.28 H	218	66.00	32.10
3	2483.50	60.8 PK	74.0	-13.2	1.28 H	218	28.50	32.30
4	2483.50	47.3 AV	54.0	-6.7	1.28 H	218	15.00	32.30
5	4874.00	54.4 PK	74.0	-19.6	1.13 H	354	15.80	38.60
6	4874.00	40.1 AV	54.0	-13.9	1.13 H	354	1.50	38.60
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	*2437.00	112.9 PK			1.05 V	180	80.80	32.10
2	*2437.00	103.7 AV			1.05 V	180	71.60	32.10
3	2483.50	69.9 PK	74.0	-4.1	1.05 V	180	37.60	32.30
4	2483.50	52.7 AV	54.0	-1.3	1.05 V	180	20.40	32.30
5	4874.00	51.5 PK	74.0	-22.5	1.13 V	141	12.90	38.60
6	4874.00	46.3 AV	54.0	-7.7	1.13 V	141	7.70	38.60

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

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	102.6 PK			1.22 H	212	70.40	32.20
2	*2462.00	94.0 AV			1.22 H	212	61.80	32.20
3	2483.50	60.2 PK	74.0	-13.8	1.22 H	212	27.90	32.30
4	2483.50	46.8 AV	54.0	-7.2	1.22 H	212	14.50	32.30
5	4924.00	48.2 PK	74.0	-25.8	1.02 H	234	9.40	38.80
6	4924.00	37.2 AV	54.0	-16.8	1.02 H	234	-1.60	38.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.4 PK			1.12 V	172	76.20	32.20
2	*2462.00	99.3 AV			1.12 V	172	67.10	32.20
3	2483.50	67.5 PK	74.0	-6.5	1.12 V	172	35.20	32.30
4	2483.50	52.6 AV	54.0	-1.4	1.12 V	172	20.30	32.30
5	4924.00	51.8 PK	74.0	-22.2	1.12 V	198	13.00	38.80
6	4924.00	45.2 AV	54.0	-8.8	1.12 V	198	6.40	38.80

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (20MHz): 1TX

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

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	65.5 PK	74.0	-8.5	1.00 H	219	33.50	32.00
2	2390.00	47.7 AV	54.0	-6.3	1.00 H	219	15.70	32.00
3	*2412.00	102.7 PK			1.00 H	219	70.70	32.00
4	*2412.00	94.0 AV			1.00 H	219	62.00	32.00
5	4824.00	47.8 PK	74.0	-26.2	1.02 H	232	9.30	38.50
6	4824.00	37.0 AV	54.0	-17.0	1.02 H	232	-1.50	38.50
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	69.9 PK	74.0	-4.1	1.08 V	188	37.90	32.00
2	2390.00	52.6 AV	54.0	-1.4	1.08 V	188	20.60	32.00
3	*2412.00	108.9 PK			1.07 V	189	76.90	32.00
4	*2412.00	99.3 AV			1.07 V	189	67.30	32.00
5	4824.00	52.6 PK	74.0	-21.4	1.02 V	177	14.10	38.50
6	4824.00	45.8 AV	54.0	-8.2	1.02 V	177	7.30	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	105.6 PK			1.21 H	243	73.50	32.10
2	*2437.00	96.2 AV			1.21 H	243	64.10	32.10
3	2483.50	60.5 PK	74.0	-13.5	1.21 H	243	28.20	32.30
4	2483.50	47.5 AV	54.0	-6.5	1.21 H	243	15.20	32.30
5	4874.00	54.1 PK	74.0	-19.9	1.05 H	358	15.50	38.60
6	4874.00	40.3 AV	54.0	-13.7	1.05 H	358	1.70	38.60
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	*2437.00	111.5 PK			1.00 V	179	79.40	32.10
2	*2437.00	102.5 AV			1.00 V	179	70.40	32.10
3	**2483.50**	**73.0 PK**	**74.0**	**-1.0**	**1.00 V**	**179**	**40.70**	**32.30**
4	2483.50	52.7 AV	54.0	-1.3	1.00 V	179	20.40	32.30
5	4874.00	51.8 PK	74.0	-22.2	1.35 V	157	13.20	38.60
6	4874.00	46.5 AV	54.0	-7.5	1.35 V	157	7.90	38.60

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

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	101.7 PK			1.02 H	203	69.50	32.20
2	*2462.00	93.0 AV			1.02 H	203	60.80	32.20
3	2483.50	65.2 PK	74.0	-8.8	1.02 H	203	32.90	32.30
4	2483.50	47.5 AV	54.0	-6.5	1.02 H	203	15.20	32.30
5	4924.00	47.5 PK	74.0	-26.5	1.08 H	257	8.70	38.80
6	4924.00	37.2 AV	54.0	-16.8	1.08 H	257	-1.60	38.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.5 PK			1.08 V	192	76.30	32.20
2	*2462.00	98.7 AV			1.08 V	192	66.50	32.20
3	2483.50	68.6 PK	74.0	-5.4	1.09 V	189	36.30	32.30
4	2483.50	52.6 AV	54.0	-1.4	1.09 V	189	20.30	32.30
5	4924.00	51.2 PK	74.0	-22.8	1.08 V	168	12.40	38.80
6	4924.00	44.3 AV	54.0	-9.7	1.08 V	168	5.50	38.80

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (20MHz): 2TX

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

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	58.7 PK	74.0	-15.3	1.00 H	169	26.70	32.00
2	2390.00	46.5 AV	54.0	-7.5	1.00 H	169	14.50	32.00
3	*2412.00	103.9 PK			1.00 H	169	71.90	32.00
4	*2412.00	93.0 AV			1.00 H	169	61.00	32.00
5	4824.00	50.1 PK	74.0	-23.9	1.21 H	360	11.60	38.50
6	4824.00	37.0 AV	54.0	-17.0	1.21 H	360	-1.50	38.50
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	1.00 V	98	32.70	32.00
2	2390.00	52.6 AV	54.0	-1.4	1.00 V	98	20.60	32.00
3	*2412.00	110.7 PK			1.00 V	98	78.70	32.00
4	*2412.00	99.5 AV			1.00 V	98	67.50	32.00
5	4824.00	52.8 PK	74.0	-21.2	1.28 V	202	14.30	38.50
6	4824.00	43.3 AV	54.0	-10.7	1.28 V	202	4.80	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	108.9 PK			1.00 H	169	76.80	32.10
2	*2437.00	97.8 AV			1.00 H	169	65.70	32.10
3	2494.00	61.3 PK	74.0	-12.7	1.00 H	169	29.00	32.30
4	2494.00	47.1 AV	54.0	-6.9	1.00 H	169	14.80	32.30
5	4874.00	55.5 PK	74.0	-18.5	1.17 H	2	16.90	38.60
6	4874.00	41.4 AV	54.0	-12.6	1.17 H	2	2.80	38.60
7	7311.00	57.1 PK	74.0	-16.9	1.18 H	307	12.20	44.90
8	7311.00	44.1 AV	54.0	-9.9	1.18 H	307	-0.80	44.90
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	*2437.00	115.7 PK			1.00 V	104	83.60	32.10
2	*2437.00	104.2 AV			1.00 V	104	72.10	32.10
3	2494.00	62.5 PK	74.0	-11.5	1.00 V	104	30.20	32.30
4	2494.00	50.6 AV	54.0	-3.4	1.00 V	104	18.30	32.30
5	4874.00	59.7 PK	74.0	-14.3	1.24 V	214	21.10	38.60
6	4874.00	45.8 AV	54.0	-8.2	1.24 V	214	7.20	38.60
7	7311.00	64.2 PK	74.0	-9.8	1.00 V	188	19.30	44.90
8	7311.00	50.9 AV	54.0	-3.1	1.00 V	188	6.00	44.90

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

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			1.20 H	177	73.80	32.20
2	*2462.00	95.1 AV			1.20 H	177	62.90	32.20
3	2483.50	60.2 PK	74.0	-13.8	1.18 H	178	27.90	32.30
4	2483.50	47.8 AV	54.0	-6.2	1.18 H	178	15.50	32.30
5	4924.00	51.2 PK	74.0	-22.8	1.22 H	357	12.40	38.80
6	4924.00	38.2 AV	54.0	-15.8	1.22 H	357	-0.60	38.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.5 PK			1.00 V	102	80.30	32.20
2	*2462.00	101.5 AV			1.00 V	102	69.30	32.20
3	2483.50	66.4 PK	74.0	-7.6	1.00 V	102	34.10	32.30
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**102**	**20.70**	**32.30**
5	4924.00	51.3 PK	74.0	-22.7	1.12 V	154	12.50	38.80
6	4924.00	42.6 AV	54.0	-11.4	1.12 V	154	3.80	38.80

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (40MHz): 1TX

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

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	1.17 H	207	31.20	32.00
2	2390.00	48.3 AV	54.0	-5.7	1.17 H	207	16.30	32.00
3	*2422.00	98.9 PK			1.17 H	207	66.80	32.10
4	*2422.00	90.1 AV			1.17 H	207	58.00	32.10
5	4844.00	46.5 PK	74.0	-27.5	1.08 H	295	8.00	38.50
6	4844.00	35.2 AV	54.0	-18.8	1.08 H	295	-3.30	38.50
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	66.3 PK	74.0	-7.7	1.13 V	185	34.30	32.00
2	2390.00	52.7 AV	54.0	-1.3	1.13 V	185	20.70	32.00
3	*2422.00	104.5 PK			1.13 V	185	72.40	32.10
4	*2422.00	95.2 AV			1.13 V	185	63.10	32.10
5	4844.00	50.3 PK	74.0	-23.7	1.01 V	141	11.80	38.50
6	4844.00	45.1 AV	54.0	-8.9	1.01 V	141	6.60	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	100.2 PK			1.18 H	214	68.10	32.10
2	*2437.00	91.2 AV			1.18 H	214	59.10	32.10
3	2483.50	63.5 PK	74.0	-10.5	1.18 H	214	31.20	32.30
4	2483.50	48.5 AV	54.0	-5.5	1.18 H	214	16.20	32.30
5	4874.00	46.8 PK	74.0	-27.2	1.32 H	248	8.20	38.60
6	4874.00	35.8 AV	54.0	-18.2	1.32 H	248	-2.80	38.60
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	*2437.00	105.5 PK			1.00 V	194	73.40	32.10
2	*2437.00	96.0 AV			1.00 V	194	63.90	32.10
3	2483.50	67.1 PK	74.0	-6.9	1.00 V	194	34.80	32.30
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**194**	**20.70**	**32.30**
5	4874.00	51.3 PK	74.0	-22.7	1.16 V	138	12.70	38.60
6	4874.00	45.9 AV	54.0	-8.1	1.16 V	138	7.30	38.60

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	98.0 PK			1.25 H	232	65.80	32.20
2	*2452.00	89.3 AV			1.25 H	232	57.10	32.20
3	2483.50	62.7 PK	74.0	-11.3	1.25 H	232	30.40	32.30
4	2483.50	47.5 AV	54.0	-6.5	1.25 H	232	15.20	32.30
5	4874.00	46.2 PK	74.0	-27.8	1.32 H	281	7.60	38.60
6	4874.00	34.8 AV	54.0	-19.2	1.32 H	281	-3.80	38.60
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	103.7 PK			1.08 V	186	71.50	32.20
2	*2452.00	94.5 AV			1.08 V	186	62.30	32.20
3	2483.50	68.7 PK	74.0	-5.3	1.12 V	186	36.40	32.30
4	2483.50	52.9 AV	54.0	-1.1	1.12 V	186	20.60	32.30
5	4904.00	50.9 PK	74.0	-23.1	1.02 V	158	12.20	38.70
6	4904.00	45.8 AV	54.0	-8.2	1.02 V	158	7.10	38.70

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	57.9 PK	74.0	-16.1	1.00 H	170	25.90	32.00
2	2390.00	47.6 AV	54.0	-6.4	1.00 H	170	15.60	32.00
3	*2422.00	98.8 PK			1.00 H	170	66.70	32.10
4	*2422.00	88.3 AV			1.00 H	170	56.20	32.10
5	4844.00	47.2 PK	74.0	-26.8	1.32 H	341	8.70	38.50
6	4844.00	35.7 AV	54.0	-18.3	1.32 H	341	-2.80	38.50
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	62.7 PK	74.0	-11.3	1.00 V	100	30.70	32.00
2	2390.00	52.4 AV	54.0	-1.6	1.00 V	100	20.40	32.00
3	*2422.00	105.6 PK			1.00 V	100	73.50	32.10
4	*2422.00	94.9 AV			1.00 V	100	62.80	32.10
5	4844.00	50.0 PK	74.0	-24.0	1.14 V	202	11.50	38.50
6	4844.00	43.3 AV	54.0	-10.7	1.14 V	202	4.80	38.50

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	58.2 PK	74.0	-15.8	1.01 H	167	26.20	32.00
2	2390.00	43.2 AV	54.0	-10.8	1.01 H	167	11.20	32.00
3	*2437.00	101.7 PK			1.01 H	168	69.60	32.10
4	*2437.00	91.4 AV			1.01 H	168	59.30	32.10
5	2483.50	60.7 PK	74.0	-13.3	1.01 H	167	28.40	32.30
6	2483.50	45.8 AV	54.0	-8.2	1.01 H	167	13.50	32.30
7	4874.00	55.7 PK	74.0	-18.3	1.15 H	298	17.10	38.60
8	4874.00	41.8 AV	54.0	-12.2	1.15 H	298	3.20	38.60
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	63.1 PK	74.0	-10.9	1.00 V	99	31.10	32.00
2	2390.00	52.1 AV	54.0	-1.9	1.00 V	99	20.10	32.00
3	*2437.00	108.8 PK			1.00 V	106	76.70	32.10
4	*2437.00	98.6 AV			1.00 V	106	66.50	32.10
5	2483.50	66.3 PK	74.0	-7.7	1.00 V	106	34.00	32.30
6	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**106**	**20.70**	**32.30**
7	4874.00	49.4 PK	74.0	-24.6	1.00 V	202	10.80	38.60
8	4874.00	42.2 AV	54.0	-11.8	1.00 V	202	3.60	38.60

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	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	100.3 PK			1.00 H	175	68.10	32.20
2	*2452.00	89.9 AV			1.00 H	175	57.70	32.20
3	2483.50	57.8 PK	74.0	-16.2	1.00 H	175	25.50	32.30
4	2483.50	47.5 AV	54.0	-6.5	1.00 H	175	15.20	32.30
5	4904.00	47.8 PK	74.0	-26.2	1.37 H	358	9.10	38.70
6	4904.00	36.2 AV	54.0	-17.8	1.37 H	358	-2.50	38.70
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	*2452.00	107.1 PK			1.00 V	101	74.90	32.20
2	*2452.00	96.8 AV			1.00 V	101	64.60	32.20
3	2483.50	67.5 PK	74.0	-6.5	1.00 V	101	35.20	32.30
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.00 V**	**101**	**20.70**	**32.30**
5	4904.00	50.8 PK	74.0	-23.2	1.07 V	213	12.10	38.70
6	4904.00	43.7 AV	54.0	-10.3	1.07 V	213	5.00	38.70

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.

BELOW 1GHz WORST-CASE DATA：

802.11n (20MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	TESTED BY	Sun Lin
TEST MODE	A		

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	142.52	38.20 QP	43.50	-5.30	1.25 H	91	24.50	13.70
2	227.88	39.30 QP	46.00	-6.70	1.50 H	349	27.10	12.20
3	311.30	34.30 QP	46.00	-11.70	3.00 H	104	19.10	15.20
4	468.44	37.00 QP	46.00	-9.00	1.50 H	348	17.70	19.30
5	499.48	34.80 QP	46.00	-11.20	1.50 H	17	14.70	20.10
6	559.62	39.70 QP	46.00	-6.30	1.50 H	222	18.20	21.50
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	58.72	36.10 QP	40.00	-3.90	1.00 V	217	22.60	13.50
2	64.76	36.20 QP	40.00	-3.80	1.00 V	215	23.20	13.00
3	146.40	34.70 QP	43.50	-8.80	1.00 V	39	20.90	13.80
4	249.22	32.70 QP	46.00	-13.30	2.00 V	17	19.70	13.00
5	311.30	33.40 QP	46.00	-12.60	1.50 V	179	18.20	15.20
6	468.44	35.00 QP	46.00	-11.00	1.25 V	17	15.70	19.30

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	TESTED BY	Sun Lin
TEST MODE	B		

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	138.64	34.00 QP	43.50	-9.50	2.00 H	296	20.50	13.50
2	187.14	34.00 QP	43.50	-9.50	2.00 H	114	21.80	12.20
3	249.22	34.70 QP	46.00	-11.30	1.25 H	115	21.70	13.00
4	468.44	34.10 QP	46.00	-11.90	2.00 H	21	14.80	19.30
5	577.08	40.00 QP	46.00	-6.00	1.25 H	229	18.10	21.90
6	833.16	33.40 QP	46.00	-12.60	1.25 H	294	7.80	25.60
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	58.71	36.10 QP	40.00	-3.90	1.00 V	158	22.60	13.50
2	113.42	35.70 QP	43.50	-7.80	1.00 V	321	24.60	11.10
3	311.30	33.60 QP	46.00	-12.40	1.50 V	182	18.40	15.20
4	468.44	36.60 QP	46.00	-9.40	1.00 V	345	17.30	19.30
5	577.08	33.00 QP	46.00	-13.00	1.00 V	307	11.10	21.90
6	782.72	33.10 QP	46.00	-12.90	1.25 V	138	8.30	24.80

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 (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

Tested Date: Apr. 23, 2012

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 19, 2011	Nov. 18, 2012
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 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.

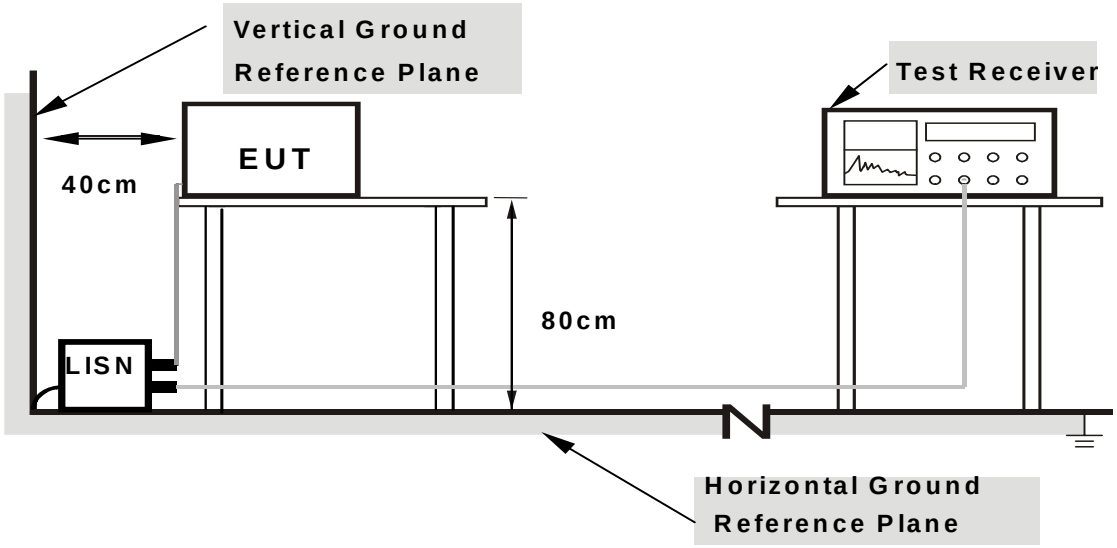
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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 from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.2.7 TEST RESULTS

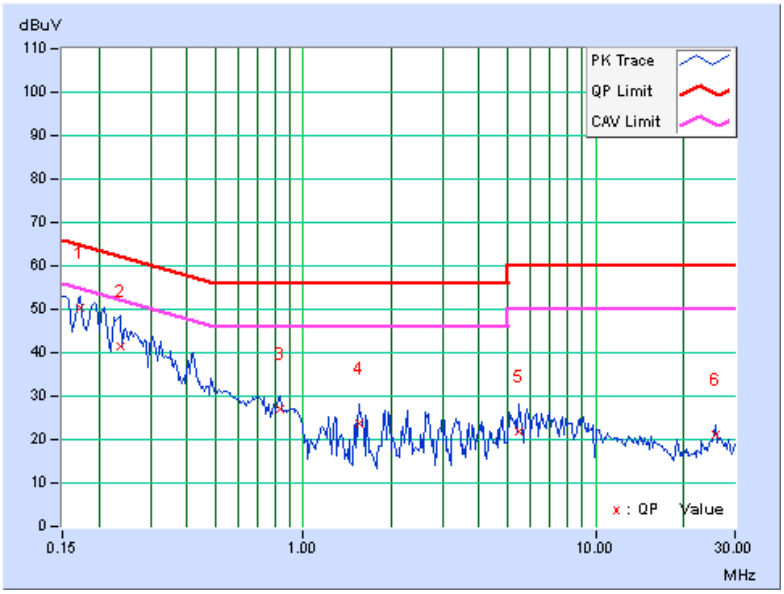
CONDUCTED WORST-CASE DATA：

802.11n (20MHz): 2TX

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	0.17344	0.15	50.18	37.48	50.33	37.63	64.79	54.79	-14.46	-17.16
2	0.23594	0.15	41.44	23.58	41.59	23.73	62.24	52.24	-20.64	-28.50
3	0.82969	0.18	27.04	17.47	27.22	17.65	56.00	46.00	-28.78	-28.35
4	1.55859	0.23	23.55	11.29	23.78	11.52	56.00	46.00	-32.22	-34.48
5	5.43750	0.36	21.54	9.25	21.90	9.61	60.00	50.00	-38.10	-40.39
6	25.81250	0.57	20.50	12.53	21.07	13.10	60.00	50.00	-38.93	-36.90

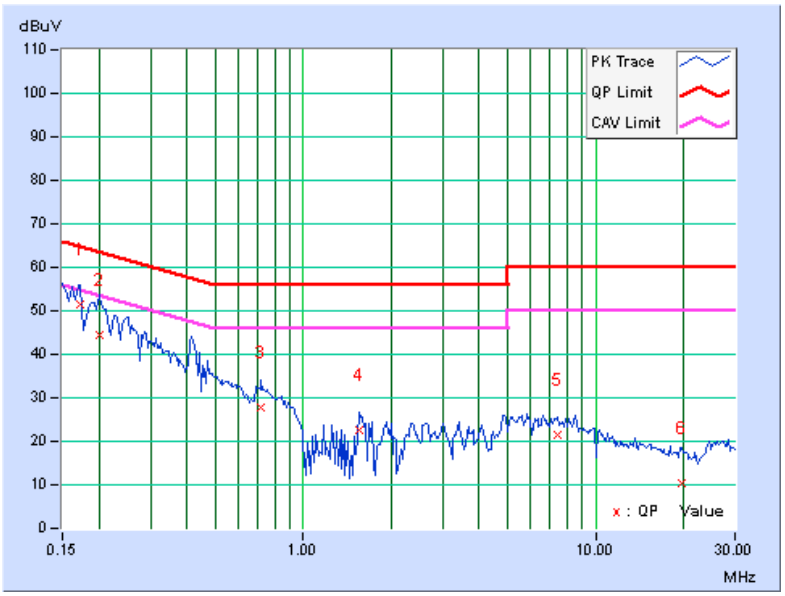
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading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



PHASE	Line 2	6dB BANDWIDTH	9kHz
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	**0.17344**	**0.13**	**51.28**	**37.92**	**51.41**	**38.05**	**64.79**	**54.79**	**-13.38**	**-16.74**
2	0.20078	0.14	44.48	27.30	44.62	27.44	63.58	53.58	-18.96	-26.14
3	0.72031	0.18	27.59	13.68	27.77	13.86	56.00	46.00	-28.23	-32.14
4	1.56250	0.23	22.21	12.12	22.44	12.35	56.00	46.00	-33.56	-33.65
5	7.42969	0.42	21.16	9.01	21.58	9.43	60.00	50.00	-38.42	-40.57
6	19.83203	0.72	9.53	-0.41	10.25	0.31	60.00	50.00	-49.75	-49.69

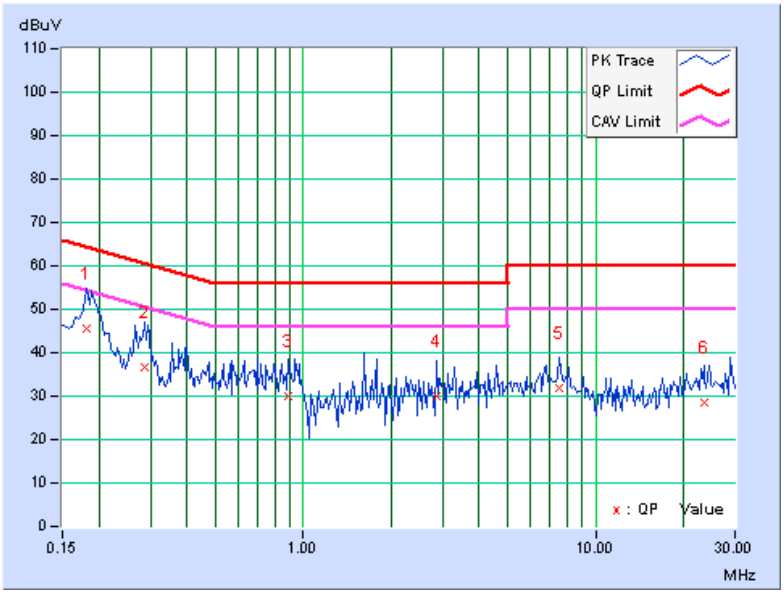
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading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



PHASE	Line 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	0.18125	0.15	45.49	26.40	45.64	26.55	64.43	54.43	-18.79	-27.88
2	0.28672	0.16	36.62	19.92	36.78	20.08	60.62	50.62	-23.84	-30.54
3	0.88828	0.19	29.81	16.92	30.00	17.11	56.00	46.00	-26.00	-28.89
4	2.84766	0.29	29.74	18.25	30.03	18.54	56.00	46.00	-25.97	-27.46
5	7.51172	0.39	31.38	20.88	31.77	21.27	60.00	50.00	-28.23	-28.73
6	23.46875	0.60	27.89	15.18	28.49	15.78	60.00	50.00	-31.51	-34.22

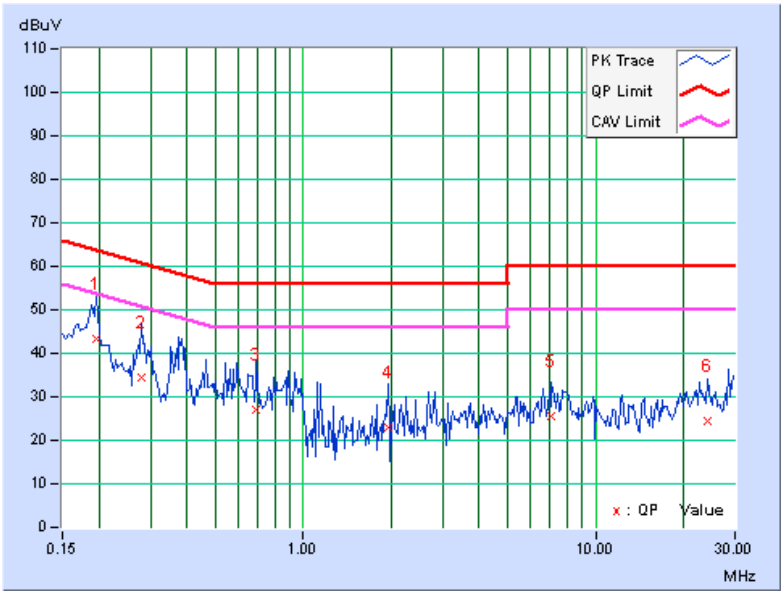
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading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



PHASE	Line 2	6dB BANDWIDTH	9kHz
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	0.19687	0.14	43.16	23.76	43.30	23.90	63.74	53.74	-20.44	-29.84
2	0.27891	0.15	34.44	16.94	34.59	17.09	60.85	50.85	-26.26	-33.76
3	0.69297	0.17	26.73	11.23	26.90	11.40	56.00	46.00	-29.10	-34.60
4	1.94141	0.26	22.61	12.18	22.87	12.44	56.00	46.00	-33.13	-33.56
5	7.08984	0.42	24.99	15.09	25.41	15.51	60.00	50.00	-34.59	-34.49
6	24.14453	0.65	23.68	10.89	24.33	11.54	60.00	50.00	-35.67	-38.46

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 INSTRUMENTS

Tested Date: Jul. 18, 2012

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 03, 2012	Feb. 02, 2013

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

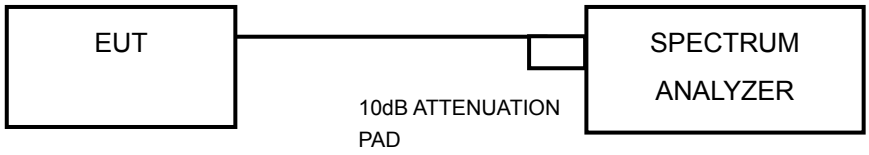
4.3.3 TEST PROCEDURE

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.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



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: 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.22	0.5	PASS
6	2437	10.22	0.5	PASS
11	2462	10.25	0.5	PASS

802.11g: 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.54	0.5	PASS
6	2437	16.54	0.5	PASS
11	2462	16.54	0.5	PASS

802.11n (20MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.71	0.5	PASS
6	2437	17.79	0.5	PASS
11	2462	17.78	0.5	PASS

802.11n (20MHz): 2TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.73	17.71	0.5	PASS
6	2437	17.75	17.75	0.5	PASS
11	2462	17.80	17.75	0.5	PASS

802.11n (40MHz): 1TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
3	2422	36.33	0.5	PASS
6	2437	36.39	0.5	PASS
9	2452	36.27	0.5	PASS

802.11n (40MHz): 2TX

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	36.33	36.16	0.5	PASS
6	2437	36.24	36.24	0.5	PASS
9	2452	36.25	36.29	0.5	PASS

4.4 MAXIMUM OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

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

4.4.2 INSTRUMENTS

Tested Date: Jul. 18, 2012

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0824011	Aug. 04, 2011	Aug. 03, 2012
Power Sensor	MA2411B	0738171	Aug. 04, 2011	Aug. 03, 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. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

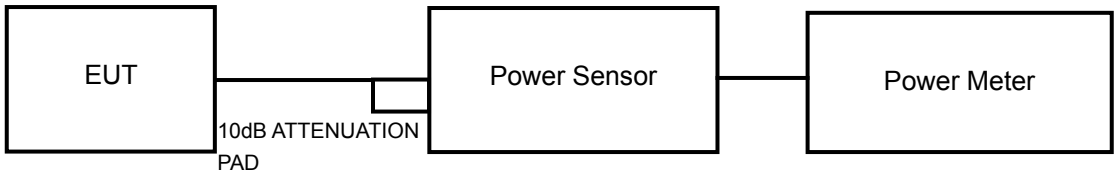
4.4.3 TEST PROCEDURES

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.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b: 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	241.0	23.82	30	PASS
6	2437	246.6	23.92	30	PASS
11	2462	261.8	24.18	30	PASS

802.11g: 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	321.4	25.07	30	PASS
6	2437	443.6	26.47	30	PASS
11	2462	331.9	25.21	30	PASS

802.11n (20MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	333.4	25.23	30	PASS
6	2437	438.5	26.42	30	PASS
11	2462	322.1	25.08	30	PASS

802.11n (20MHz): 2TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	22.92	22.02	355.1	25.5	30	PASS
6	2437	25.71	23.82	**613.4**	27.9	30	PASS
11	2462	24.18	23.57	489.3	26.9	30	PASS

802.11n (40MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
3	2422	267.9	24.28	30	PASS
6	2437	297.9	24.74	30	PASS
9	2452	274.2	24.38	30	PASS

802.11n (40MHz): 2TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	2422	22.09	21.37	298.9	24.8	30	PASS
6	2437	23.89	23.28	457.7	26.6	30	PASS
9	2452	22.92	22.82	387.3	25.9	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 INSTRUMENTS

Tested Date: Jul. 18, 2012

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 03, 2012	Feb. 02, 2013

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

4.5.3 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.

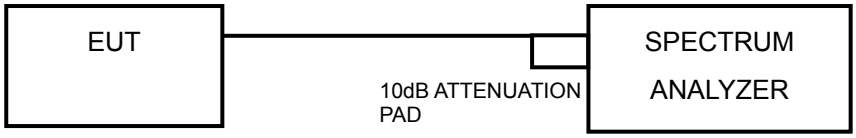
c. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

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)

4.5.4 DEVIATION FROM TEST STANDARD

No deviation.

4.5.5 TEST SETUP



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	10.97	-4.26	8	PASS
6	2437	11.28	-3.95	8	PASS
11	2462	11.50	-3.73	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	5.29	-9.94	8	PASS
11	2462	3.73	-11.50	8	PASS

802.11n (20MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.91	-11.32	8	PASS
6	2437	5.24	-9.99	8	PASS
11	2462	3.96	-11.27	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	-0.43	-15.66	3.01	-12.65	8	PASS
	6	2437	2.65	-12.58	3.01	-9.57	8	PASS
	11	2462	1.99	-13.24	3.01	-10.23	8	PASS
1	1	2412	0.20	-15.03	3.01	-12.02	8	PASS
	6	2437	2.75	-12.48	3.01	-9.47	8	PASS
	11	2462	3.07	-12.16	3.01	-9.15	8	PASS

802.11n (40MHz): 1TX

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
3	2422	-2.34	-17.57	8	PASS
6	2437	-1.55	-16.78	8	PASS
9	2452	-1.68	-16.91	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	-3.93	-19.16	3.01	-16.15	8	PASS
	6	2437	-1.26	-16.49	3.01	-13.48	8	PASS
	9	2452	-3.04	-18.27	3.01	-15.26	8	PASS
1	3	2422	-3.07	-18.30	3.01	-15.29	8	PASS
	6	2437	-1.07	-16.30	3.01	-13.29	8	PASS
	9	2452	-1.75	-16.98	3.01	-13.97	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 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.3 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.

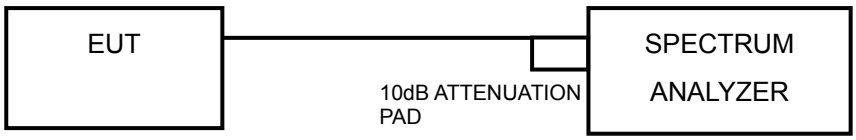
MEASUREMENT PROCEDURE OOBE

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.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6.

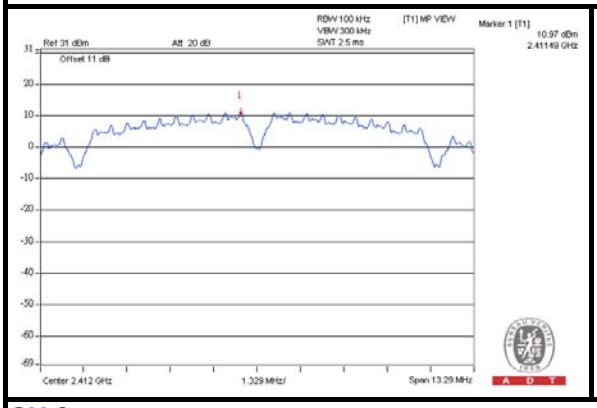
4.6.7 TEST RESULTS

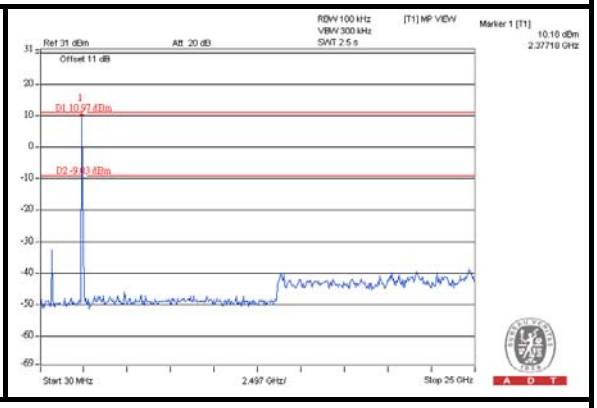
The conducted emission test is performed on each TX port of operating mode without summing or adding 10log (N) since the limit is relative emission limit. Only worst data of each operating mode is presented.

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.

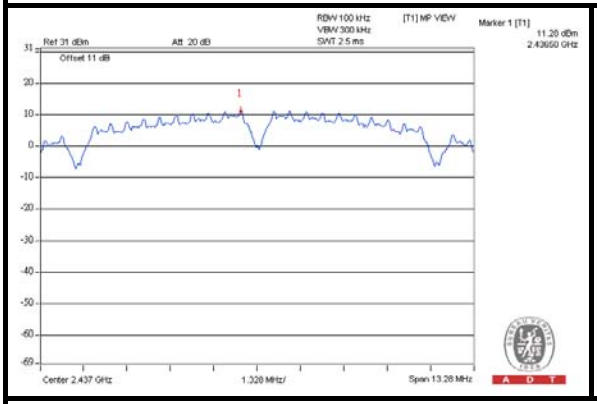
802.11b: 1TX

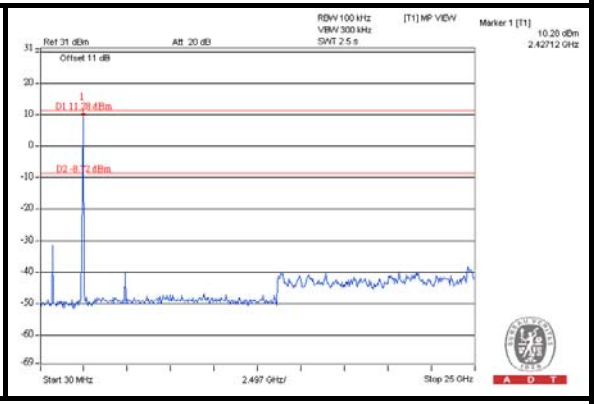
CH 1



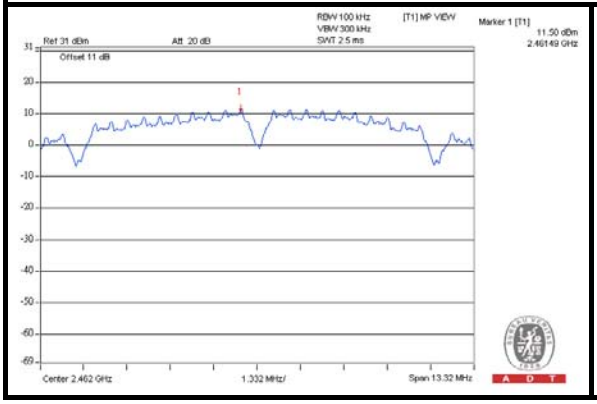


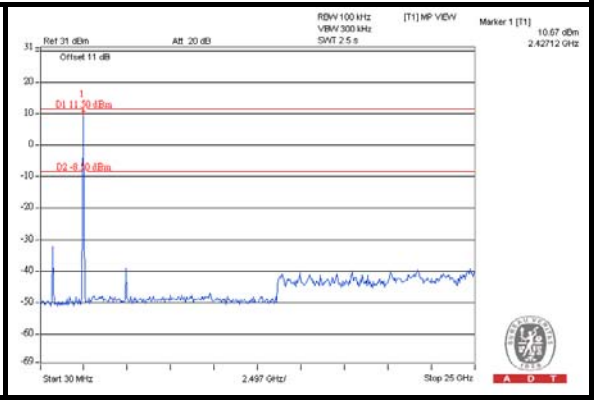
CH 6





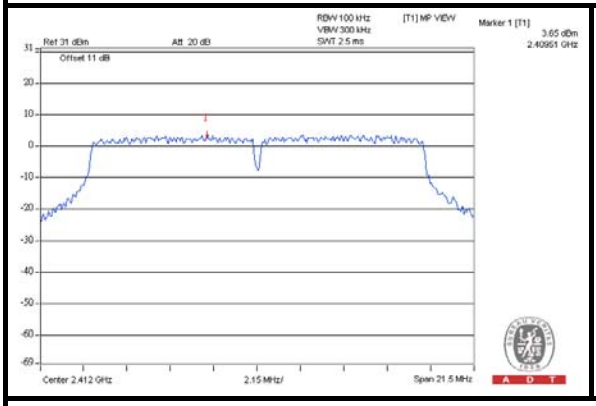
CH 11

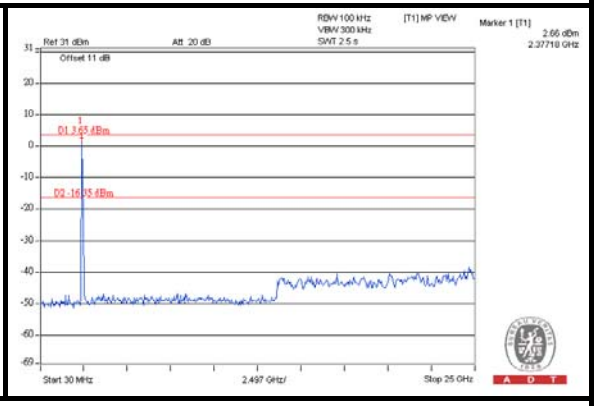




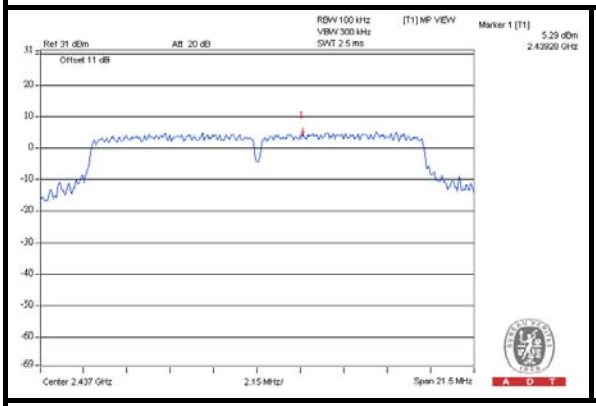
802.11g: 1TX

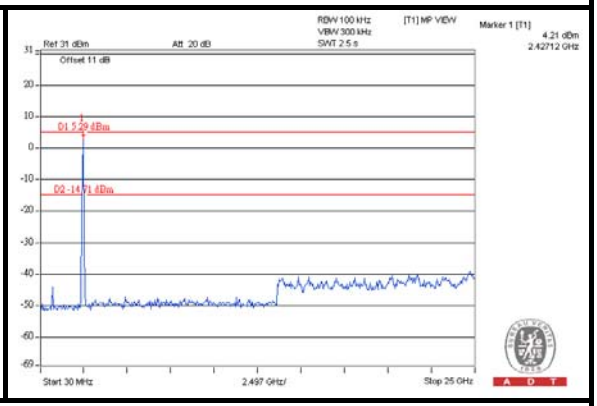
CH 1



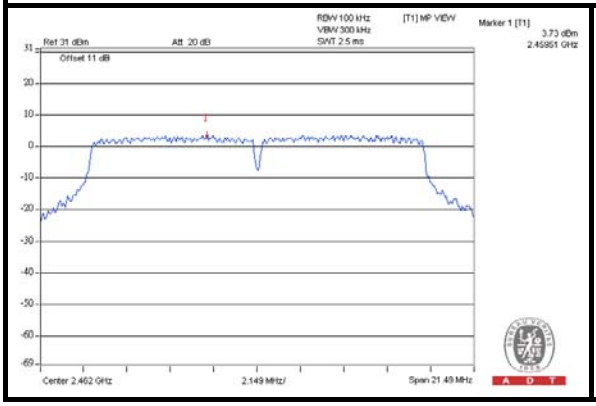


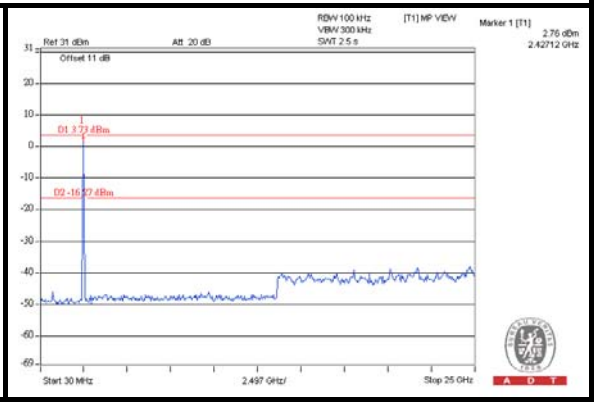
CH 6





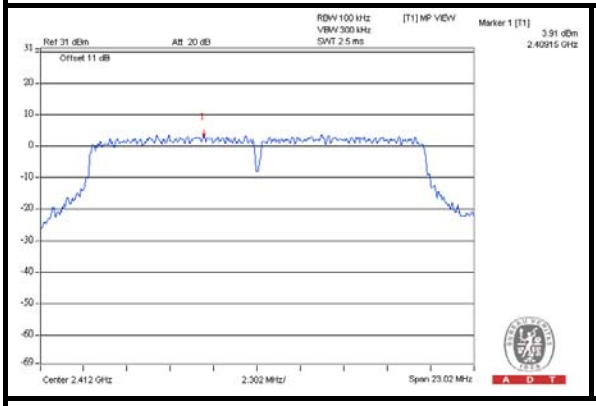
CH 11

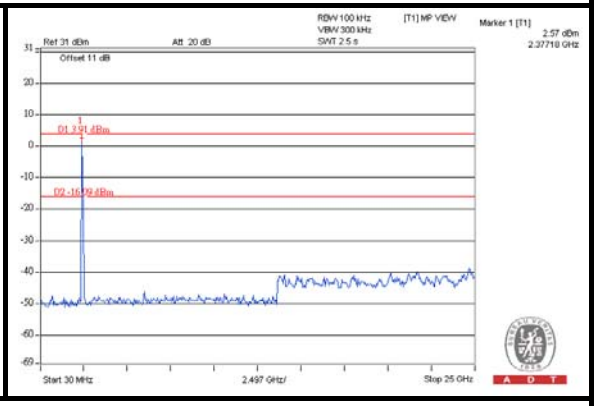




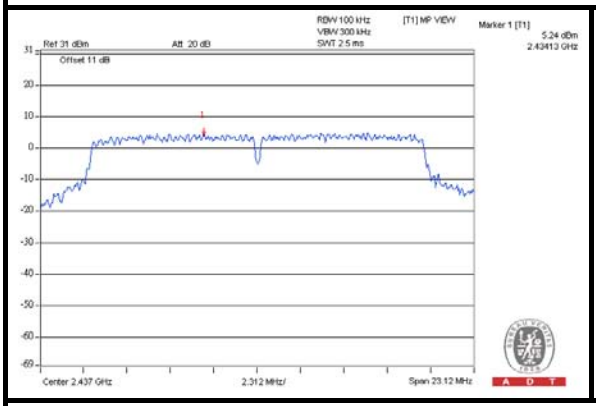
802.11n (20MHz): 1TX

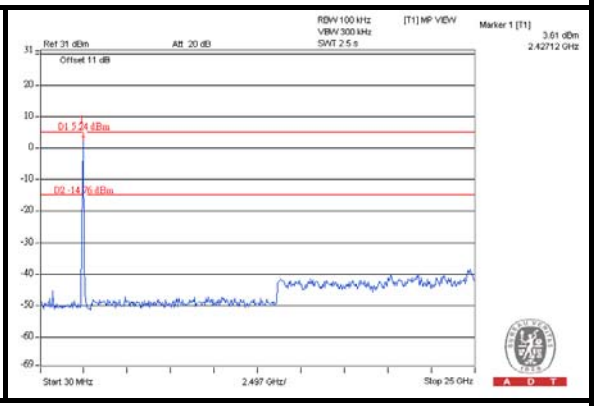
CH 1



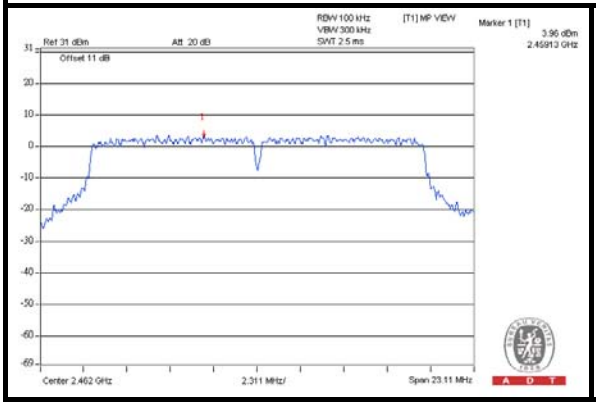


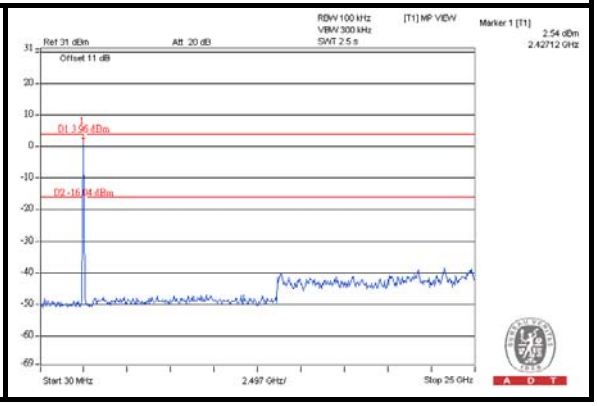
CH 6





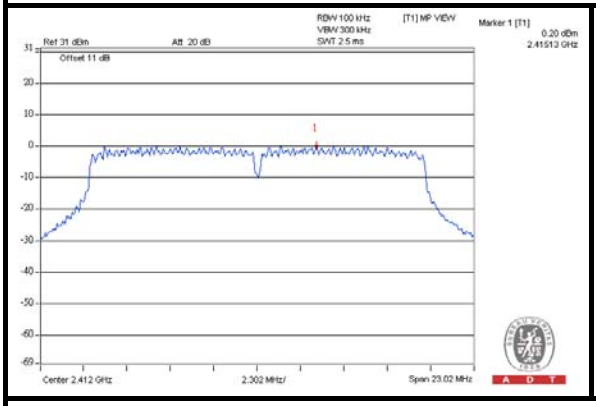
CH 11

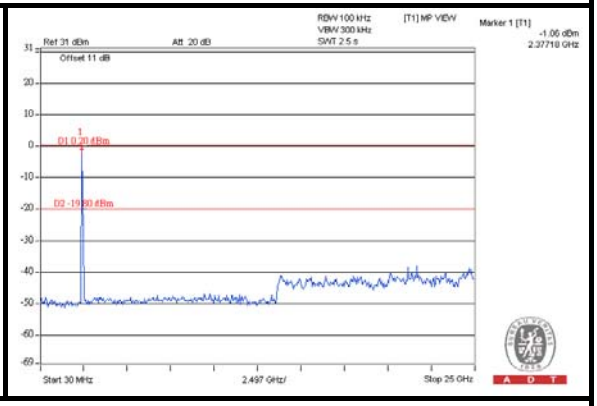




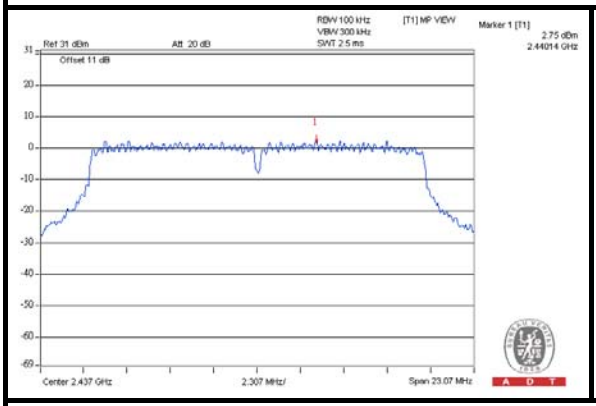
802.11n (20MHz): 2TX

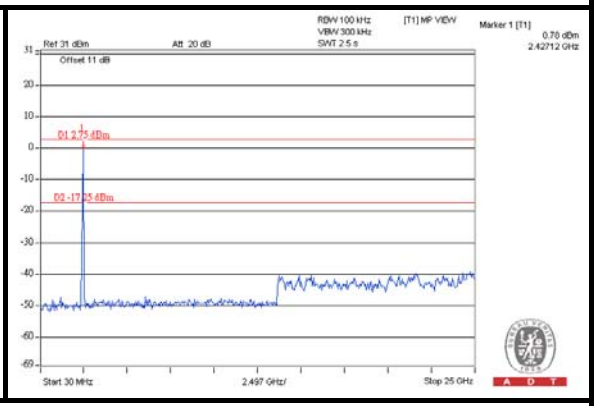
CH 1



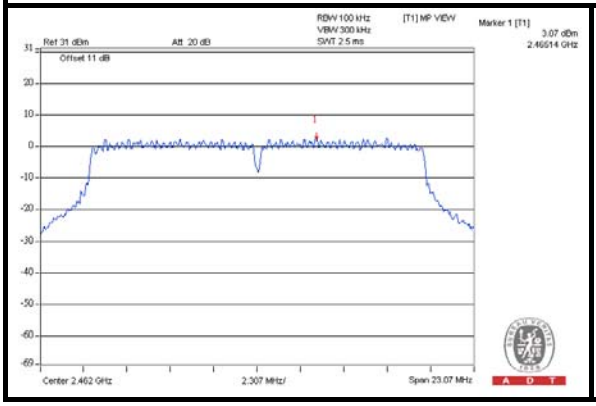


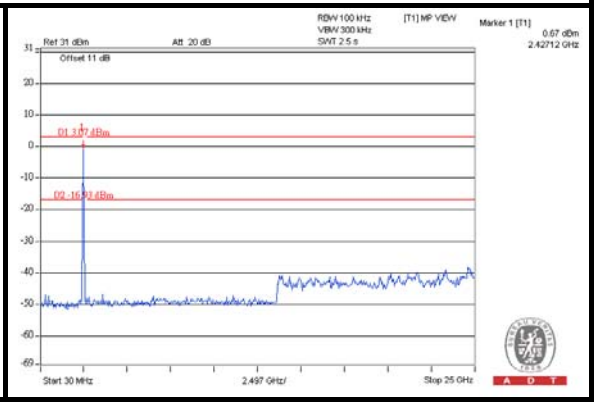
CH 6





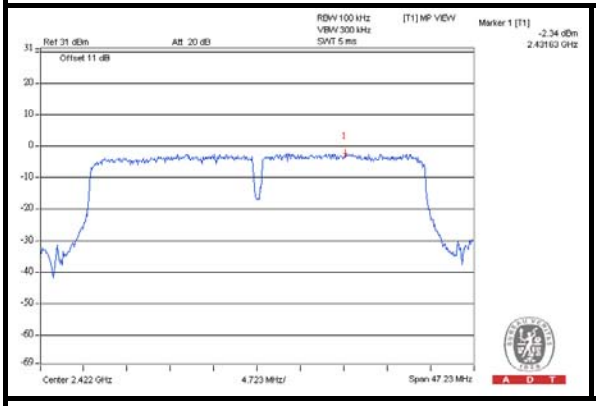
CH 11

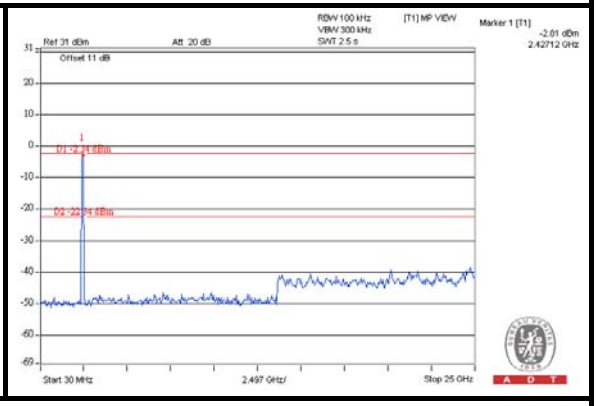




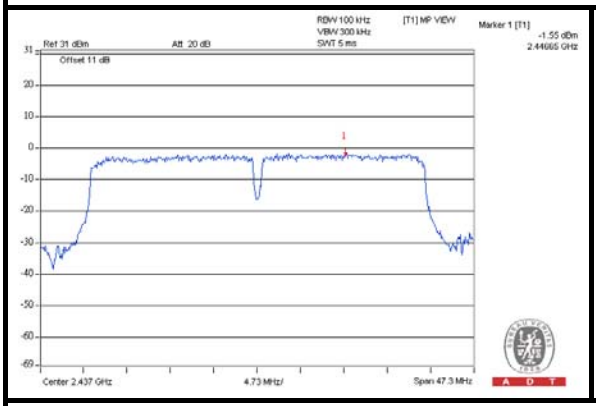
802.11n (40MHz): 1TX

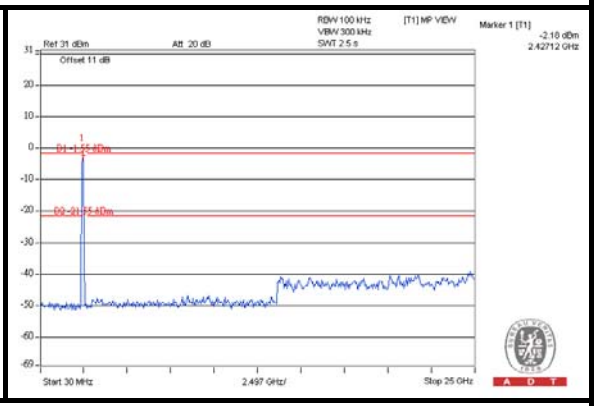
CH 3



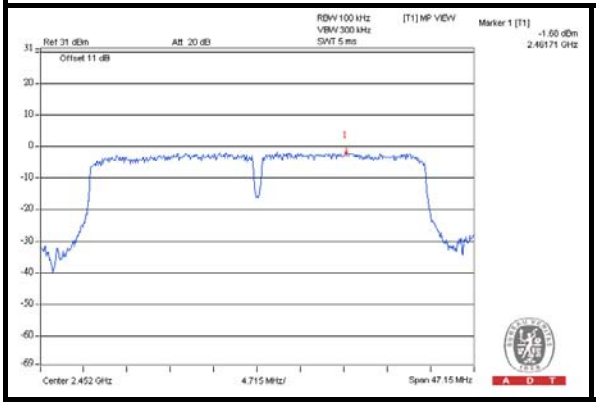


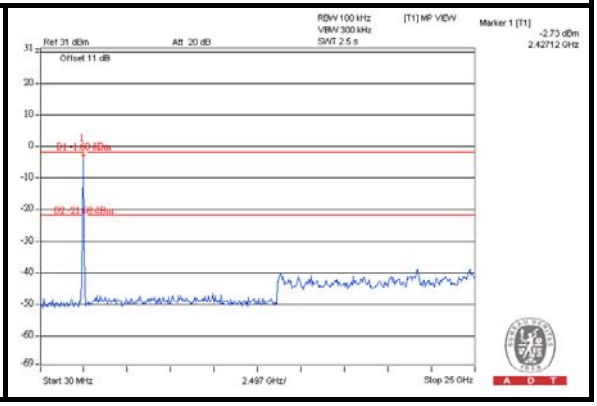
CH 6





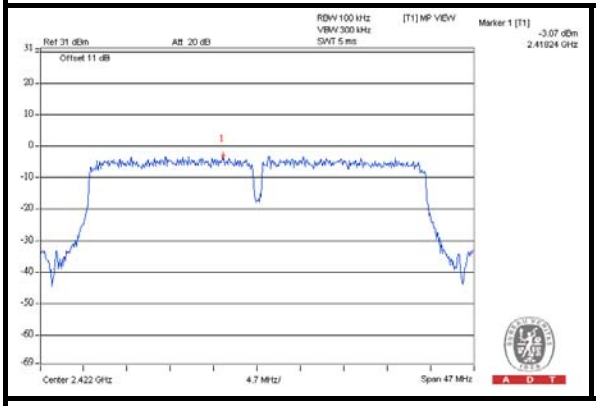
CH 9

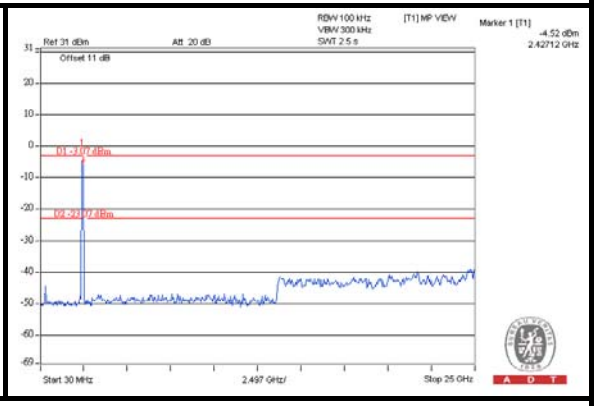




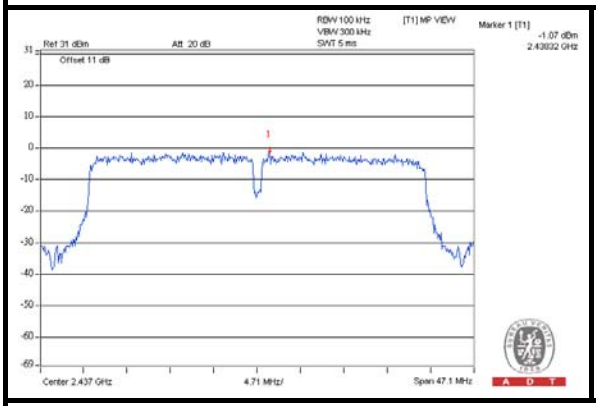
802.11n (40MHz): 2TX

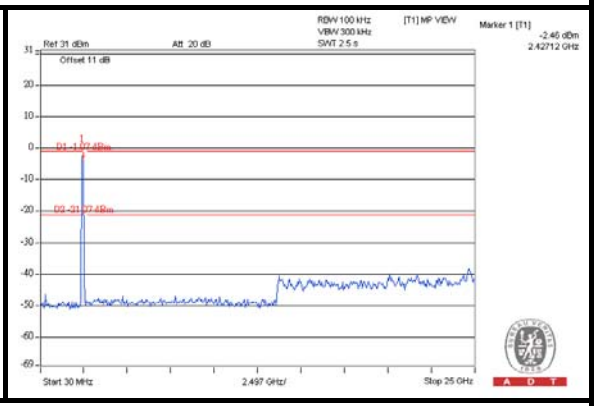
CH 3



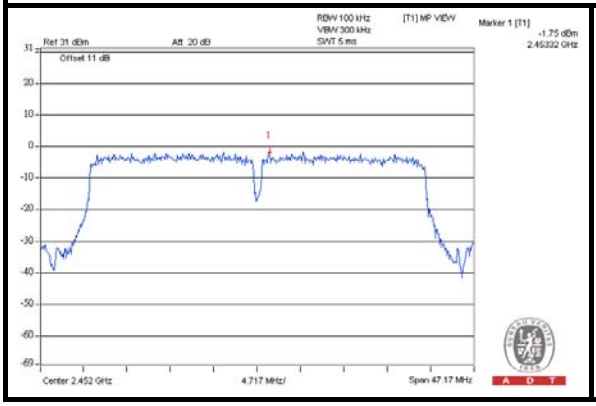


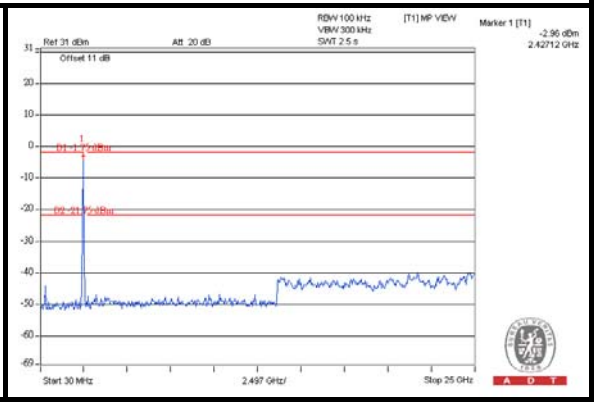
CH 6





CH 9





5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

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: 886-3-3270892

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---