

FCC TEST REPORT

REPORT NO.: RF111117E04

MODEL NO.: WFA9271M10 (Refer to item 3.1 for the more details)

FCC ID: XEH-WFA9271M01

RECEIVED: Nov. 17, 2011

TESTED: Nov. 22 ~ Nov. 29, 2011

ISSUED: Dec. 01, 2011

APPLICANT: Ajoho Enterprise Co., Ltd.

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11494, Taiwan (R.O.C.)

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.)
Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New
Taipei City, Taiwan (R.O.C)

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	Dec. 01, 2011

1. CERTIFICATION

PRODUCT: Wireless Module

MODEL: WFA9271M10 (Refer to item 3.1 for the more details)

BRAND: AJOHO

APPLICANT: Ajoho Enterprise Co., Ltd.

TESTED: Nov. 22 ~ Nov. 29, 2011

TEST SAMPLE: MASS-PRODUCTION

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

ANSI C63.4-2003

ANSI C63.10-2009

The above equipment (model: WFA9271M20) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , DATE : Dec. 01, 2011
Pettie Chen / Specialist

APPROVED BY :  , DATE : Dec. 01, 2011
Gary Chang / Technical Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART 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 -13.79dB at 0.150MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2390.0MHz.
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 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	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless Module
MODEL NO.	WFA9271M10 (Refer to NOTE for the more details)
FCC ID	XEH-WFA9271M01
POWER SUPPLY	3.3Vdc or 5.0Vdc
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	512.9mW
ANTENNA TYPE	Refer to Note
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

- The following models are provided to this EUT. RF part is electrically identical to below models. Different between below models is only minor circuitry for non transmitter portions as following description.

Brand	Model	Description	Difference
AJOHO	WFA9271M10	Without LDO (3.3V)	With R21, without VR1, L5, C59, R15, R18
	WFA9271M20	With LDO (5.0V)	Without R21, with VR1, L5, C59, R15, R18

* After pretesting, WFA9271M20 is the worst for the final test.

- 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

- There are 3 antennas for the EUT.

No.	Type	Gain(dBi)	Connector
1	Dipole	4.60 dBi	I-PEX
2	PIFA	4.00 dBi	I-PEX
3	Monopole	3.99 dBi	I-PEX

- 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):

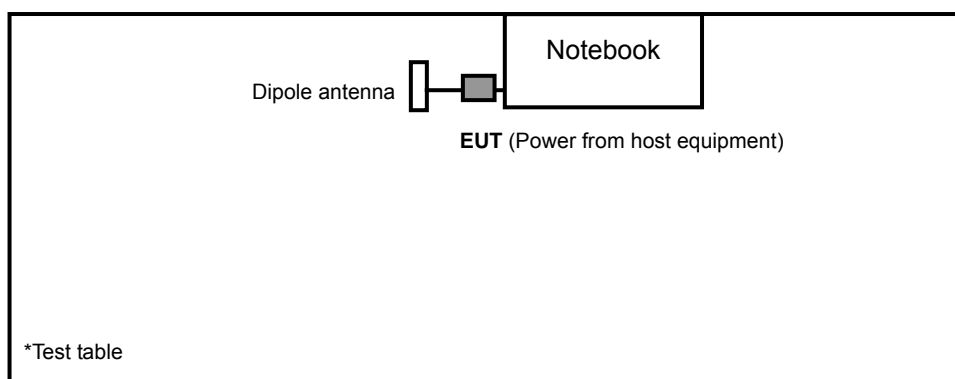
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

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

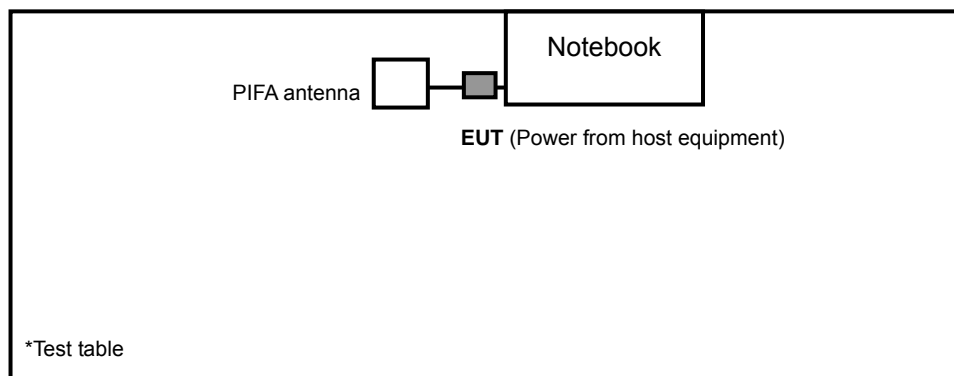
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

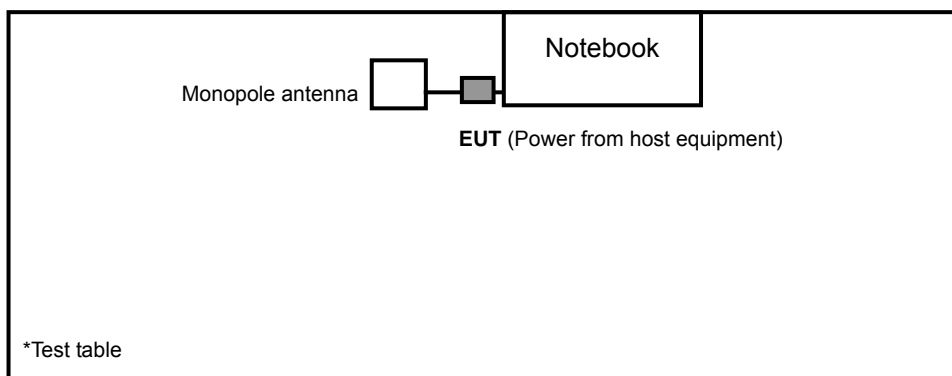
TEST MODE A



TEST MODE B



TEST MODE C



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	DELL	Latitude E5420	NA	FCC DoC Approved

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

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

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 1
B	√	√	√	-	EUT with antenna 2
C	√	√	√	-	EUT with antenna 3

Where **RE \geq 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: "-": 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, XYZ axis 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)	AXIS
A, B, C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	X
A, B, C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	X
A, B, C	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	X
A, B, C	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	X

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, XYZ axis 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)	AXIS
A, B, C	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	6.5	X

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, C	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	6.5

BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis 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)	AXIS
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0	X
A	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0	X
A	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5	X
A	802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	13.5	X

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	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
A	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Antony Lee
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
PLC	26deg. C, 62%RH	120Vac, 60Hz	Anderson Hong
APCM	25deg. C, 68%RH	120Vac, 60Hz	Antony Lee

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
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. 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.

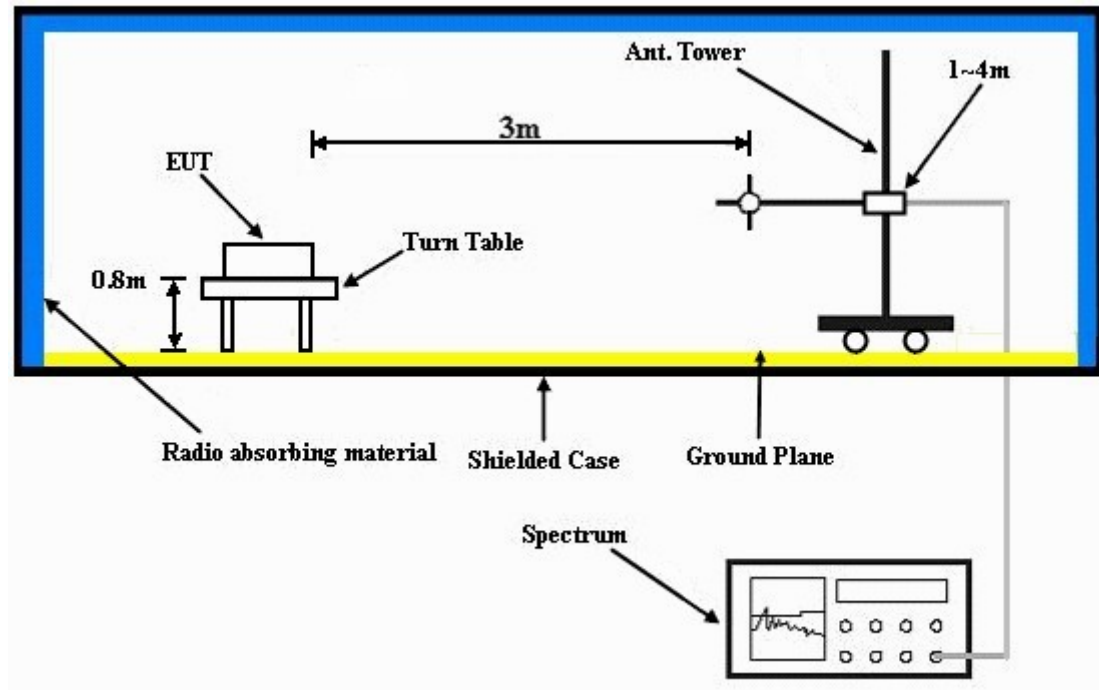
NOTE:

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

- Plugged the EUT into the notebook and placed them on the testing table.
- The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	55.2 PK	74.0	-18.8	1.34 H	92	24.10	31.10
2	2390.00	45.1 AV	54.0	-8.9	1.34 H	92	14.00	31.10
3	*2412.00	106.2 PK			1.34 H	91	75.00	31.20
4	*2412.00	102.3 AV			1.34 H	91	71.10	31.20
5	4824.00	48.8 PK	74.0	-25.2	1.03 H	229	11.90	36.90
6	4824.00	41.2 AV	54.0	-12.8	1.03 H	229	4.30	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	1.36 V	351	24.50	31.10
2	2390.00	45.2 AV	54.0	-8.8	1.36 V	351	14.10	31.10
3	*2412.00	101.8 PK			1.36 V	350	70.60	31.20
4	*2412.00	97.9 AV			1.36 V	350	66.70	31.20
5	4824.00	47.6 PK	74.0	-26.4	1.30 V	150	10.70	36.90
6	4824.00	38.2 AV	54.0	-15.8	1.30 V	150	1.30	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	57.2 PK	74.0	-16.8	1.08 H	182	26.10	31.10
2	2390.00	44.9 AV	54.0	-9.1	1.08 H	182	13.80	31.10
3	*2437.00	108.4 PK			1.07 H	180	77.10	31.30
4	*2437.00	104.4 AV			1.07 H	180	73.10	31.30
5	4874.00	55.2 PK	74.0	-18.8	1.12 H	183	18.20	37.00
6	4874.00	52.5 AV	54.0	-1.5	1.12 H	183	15.50	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	56.2 PK	74.0	-17.8	1.32 V	315	25.10	31.10
2	2390.00	43.9 AV	54.0	-10.1	1.32 V	315	12.80	31.10
3	*2437.00	102.5 PK			1.32 V	312	71.20	31.30
4	*2437.00	98.6 AV			1.32 V	312	67.30	31.30
5	4874.00	55.3 PK	74.0	-18.7	1.28 V	294	18.30	37.00
6	4874.00	51.4 AV	54.0	-2.6	1.28 V	294	14.40	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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	106.3 PK			1.36 H	32	74.90	31.40
2	*2462.00	102.5 AV			1.36 H	32	71.10	31.40
3	2483.50	55.3 PK	74.0	-18.7	1.36 H	32	23.90	31.40
4	2483.50	46.8 AV	54.0	-7.2	1.36 H	32	15.40	31.40
5	4924.00	48.8 PK	74.0	-25.2	1.02 H	224	11.70	37.10
6	4924.00	42.6 AV	54.0	-11.4	1.02 H	224	5.50	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	102.1 PK			1.35 V	348	70.70	31.40
2	*2462.00	98.3 AV			1.35 V	348	66.90	31.40
3	2483.50	55.6 PK	74.0	-18.4	1.35 V	348	24.20	31.40
4	2483.50	44.1 AV	54.0	-9.9	1.35 V	348	12.70	31.40
5	4924.00	48.2 PK	74.0	-25.8	1.25 V	166	11.10	37.10
6	4924.00	38.6 AV	54.0	-15.4	1.25 V	166	1.50	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	57.8 PK	74.0	-16.2	1.39 H	3	26.70	31.10
2	2390.00	50.9 AV	54.0	-3.1	1.39 H	3	19.80	31.10
3	*2412.00	107.9 PK			1.40 H	4	76.70	31.20
4	*2412.00	103.9 AV			1.40 H	4	72.70	31.20
5	4824.00	49.5 PK	74.0	-24.5	1.13 H	312	12.60	36.90
6	4824.00	41.5 AV	54.0	-12.5	1.13 H	312	4.60	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	52.8 PK	74.0	-21.2	1.00 V	59	21.70	31.10
2	2390.00	44.0 AV	54.0	-10.0	1.00 V	59	12.90	31.10
3	*2412.00	98.2 PK			1.00 V	59	67.00	31.20
4	*2412.00	94.6 AV			1.00 V	59	63.40	31.20
5	4824.00	46.7 PK	74.0	-27.3	1.00 V	19	9.80	36.90
6	4824.00	34.2 AV	54.0	-19.8	1.00 V	19	-2.70	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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2437.00	109.4 PK			1.36 H	20	78.10	31.30
2	*2437.00	105.6 AV			1.36 H	20	74.30	31.30
3	2483.50	56.5 PK	74.0	-17.5	1.36 H	18	25.10	31.40
4	2483.50	45.4 AV	54.0	-8.6	1.36 H	18	14.00	31.40
5	4874.00	50.3 PK	74.0	-23.7	1.12 H	316	13.30	37.00
6	4874.00	42.4 AV	54.0	-11.6	1.12 H	316	5.40	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	*2437.00	100.4 PK			1.80 V	95	69.10	31.30
2	*2437.00	96.2 AV			1.80 V	95	64.90	31.30
3	2483.50	54.6 PK	74.0	-19.4	1.80 V	96	23.20	31.40
4	2483.50	44.2 AV	54.0	-9.8	1.80 V	96	12.80	31.40
5	4874.00	46.8 PK	74.0	-27.2	1.00 V	21	9.80	37.00
6	4874.00	34.5 AV	54.0	-19.5	1.00 V	21	-2.50	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	107.1 PK			1.38 H	6	75.70	31.40
2	*2462.00	103.6 AV			1.38 H	6	72.20	31.40
3	2483.50	58.0 PK	74.0	-16.0	1.38 H	6	26.60	31.40
4	2483.50	48.2 AV	54.0	-5.8	1.38 H	6	16.80	31.40
5	4924.00	50.2 PK	74.0	-23.8	1.15 H	320	13.10	37.10
6	4924.00	42.3 AV	54.0	-11.7	1.15 H	320	5.20	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	98.7 PK			1.76 V	97	67.30	31.40
2	*2462.00	95.0 AV			1.76 V	97	63.60	31.40
3	2483.50	55.9 PK	74.0	-18.1	1.76 V	97	24.50	31.40
4	2483.50	45.2 AV	54.0	-8.8	1.76 V	97	13.80	31.40
5	4924.00	47.2 PK	74.0	-26.8	1.00 V	21	10.10	37.10
6	4924.00	35.1 AV	54.0	-18.9	1.00 V	21	-2.00	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	57.5 PK	74.0	-16.5	1.36 H	72	26.40	31.10
2	2390.00	47.8 AV	54.0	-6.2	1.36 H	72	16.70	31.10
3	*2412.00	106.6 PK			1.32 H	69	75.40	31.20
4	*2412.00	102.8 AV			1.32 H	69	71.60	31.20
5	4824.00	50.4 PK	74.0	-23.6	1.65 H	148	13.50	36.90
6	4824.00	44.2 AV	54.0	-9.8	1.65 H	148	7.30	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	54.1 PK	74.0	-19.9	1.39 V	8	23.00	31.10
2	2390.00	45.1 AV	54.0	-8.9	1.39 V	8	14.00	31.10
3	*2412.00	99.3 PK			1.39 V	8	68.10	31.20
4	*2412.00	95.5 AV			1.39 V	8	64.30	31.20
5	4824.00	47.5 PK	74.0	-26.5	1.00 V	13	10.60	36.90
6	4824.00	39.0 AV	54.0	-15.0	1.00 V	13	2.10	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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	57.5 PK	74.0	-16.5	1.35 H	74	26.40	31.10
2	2390.00	45.3 AV	54.0	-8.7	1.35 H	74	14.20	31.10
3	*2437.00	108.2 PK			1.35 H	74	76.90	31.30
4	*2437.00	104.6 AV			1.35 H	74	73.30	31.30
5	4874.00	53.5 PK	74.0	-20.5	1.00 H	219	16.50	37.00
6	4874.00	49.7 AV	54.0	-4.3	1.00 H	219	12.70	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	56.5 PK	74.0	-17.5	1.28 V	295	25.40	31.10
2	2390.00	44.2 AV	54.0	-9.8	1.28 V	295	13.10	31.10
3	*2437.00	104.3 PK			1.28 V	299	73.00	31.30
4	*2437.00	100.6 AV			1.28 V	299	69.30	31.30
5	4874.00	50.6 PK	74.0	-23.4	1.02 V	64	13.60	37.00
6	4874.00	44.8 AV	54.0	-9.2	1.02 V	64	7.80	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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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			1.35 H	68	75.10	31.40
2	*2462.00	102.3 AV			1.35 H	68	70.90	31.40
3	2483.50	57.2 PK	74.0	-16.8	1.35 H	68	25.80	31.40
4	2483.50	48.6 AV	54.0	-5.4	1.35 H	68	17.20	31.40
5	4924.00	50.6 PK	74.0	-23.4	1.59 H	145	13.50	37.10
6	4924.00	44.5 AV	54.0	-9.5	1.59 H	145	7.40	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	100.2 PK			1.41 V	10	68.80	31.40
2	*2462.00	96.4 AV			1.41 V	10	65.00	31.40
3	2483.50	54.3 PK	74.0	-19.7	1.41 V	9	22.90	31.40
4	2483.50	45.6 AV	54.0	-8.4	1.41 V	9	14.20	31.40
5	4924.00	47.5 PK	74.0	-26.5	1.00 V	19	10.40	37.10
6	4924.00	38.2 AV	54.0	-15.8	1.00 V	19	1.10	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.

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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	70.3 PK	74.0	-3.7	1.38 H	19	39.20	31.10
2	2390.00	53.0 AV	54.0	-1.0	1.38 H	19	21.90	31.10
3	*2412.00	105.2 PK			1.35 H	6	74.00	31.20
4	*2412.00	93.7 AV			1.35 H	6	62.50	31.20
5	4824.00	47.4 PK	74.0	-26.6	1.00 H	5	10.50	36.90
6	4824.00	33.4 AV	54.0	-20.6	1.00 H	5	-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	67.2 PK	74.0	-6.8	1.74 V	286	36.10	31.10
2	2390.00	50.8 AV	54.0	-3.2	1.74 V	286	19.70	31.10
3	*2412.00	103.0 PK			1.71 V	287	71.80	31.20
4	*2412.00	91.7 AV			1.71 V	287	60.50	31.20
5	4824.00	46.1 PK	74.0	-27.9	1.13 V	60	9.20	36.90
6	4824.00	32.7 AV	54.0	-21.3	1.13 V	60	-4.20	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	56.3 PK	74.0	-17.7	1.36 H	92	25.20	31.10
2	2390.00	44.9 AV	54.0	-9.1	1.36 H	92	13.80	31.10
3	*2437.00	107.3 PK			1.36 H	92	76.00	31.30
4	*2437.00	95.7 AV			1.36 H	92	64.40	31.30
5	4874.00	45.7 PK	74.0	-28.3	1.00 H	121	8.70	37.00
6	4874.00	32.5 AV	54.0	-21.5	1.00 H	121	-4.50	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	53.5 PK	74.0	-20.5	1.02 V	143	22.40	31.10
2	2390.00	44.7 AV	54.0	-9.3	1.02 V	143	13.60	31.10
3	*2437.00	103.8 PK			1.02 V	143	72.50	31.30
4	*2437.00	92.9 AV			1.02 V	143	61.60	31.30
5	4874.00	42.9 PK	74.0	-31.1	1.00 V	14	5.90	37.00
6	4874.00	33.2 AV	54.0	-20.8	1.00 V	14	-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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	103.6 PK			1.24 H	133	72.20	31.40
2	*2462.00	92.3 AV			1.24 H	133	60.90	31.40
3	2483.50	65.7 PK	74.0	-8.3	1.23 H	125	34.30	31.40
4	2483.50	50.4 AV	54.0	-3.6	1.23 H	125	19.00	31.40
5	4924.00	46.4 PK	74.0	-27.6	1.00 H	336	9.30	37.10
6	4924.00	32.2 AV	54.0	-21.8	1.00 H	336	-4.90	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	101.9 PK			1.65 V	284	70.50	31.40
2	*2462.00	90.7 AV			1.65 V	284	59.30	31.40
3	2483.50	61.4 PK	74.0	-12.6	1.62 V	287	30.00	31.40
4	2483.50	47.4 AV	54.0	-6.6	1.62 V	287	16.00	31.40
5	4924.00	46.2 PK	74.0	-27.8	1.00 V	36	9.10	37.10
6	4924.00	32.2 AV	54.0	-21.8	1.00 V	36	-4.90	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	65.2 PK	74.0	-8.8	1.40 H	10	34.10	31.10
2	2390.00	53.0 AV	54.0	-1.0	1.40 H	10	21.90	31.10
3	*2412.00	108.0 PK			1.40 H	10	76.80	31.20
4	*2412.00	98.0 AV			1.40 H	10	66.80	31.20
5	4824.00	46.9 PK	74.0	-27.1	1.00 H	2	10.00	36.90
6	4824.00	33.1 AV	54.0	-20.9	1.00 H	2	-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	55.9 PK	74.0	-18.1	1.12 V	98	24.80	31.10
2	2390.00	46.0 AV	54.0	-8.0	1.12 V	98	14.90	31.10
3	*2412.00	98.5 PK			1.11 V	97	67.30	31.20
4	*2412.00	88.7 AV			1.11 V	97	57.50	31.20
5	4824.00	45.9 PK	74.0	-28.1	1.00 V	35	9.00	36.90
6	4824.00	32.7 AV	54.0	-21.3	1.00 V	35	-4.20	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2437.00	110.8 PK			1.36 H	319	79.50	31.30
2	*2437.00	99.8 AV			1.36 H	319	68.50	31.30
3	2483.50	60.4 PK	74.0	-13.6	1.31 H	321	29.00	31.40
4	2483.50	45.5 AV	54.0	-8.5	1.31 H	321	14.10	31.40
5	4874.00	47.0 PK	74.0	-27.0	1.33 H	4	10.00	37.00
6	4874.00	36.5 AV	54.0	-17.5	1.33 H	4	-0.50	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	*2437.00	101.9 PK			1.13 V	6	70.60	31.30
2	*2437.00	90.5 AV			1.13 V	6	59.20	31.30
3	2483.50	55.2 PK	74.0	-18.8	1.13 V	13	23.80	31.40
4	2483.50	44.7 AV	54.0	-9.3	1.13 V	13	13.30	31.40
5	4874.00	46.8 PK	74.0	-27.2	1.21 V	12	9.80	37.00
6	4874.00	33.9 AV	54.0	-20.1	1.21 V	12	-3.10	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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	105.8 PK			1.35 H	14	74.40	31.40
2	*2462.00	94.4 AV			1.35 H	14	63.00	31.40
3	2483.50	63.0 PK	74.0	-11.0	1.36 H	14	31.60	31.40
4	2483.50	49.3 AV	54.0	-4.7	1.36 H	14	17.90	31.40
5	4924.00	47.2 PK	74.0	-26.8	1.00 H	5	10.10	37.10
6	4924.00	33.5 AV	54.0	-20.5	1.00 H	5	-3.60	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	95.8 PK			1.11 V	93	64.40	31.40
2	*2462.00	85.4 AV			1.11 V	93	54.00	31.40
3	2483.50	55.8 PK	74.0	-18.2	1.11 V	93	24.40	31.40
4	2483.50	45.1 AV	54.0	-8.9	1.11 V	93	13.70	31.40
5	4924.00	46.2 PK	74.0	-27.8	1.00 V	35	9.10	37.10
6	4924.00	33.1 AV	54.0	-20.9	1.00 V	35	-4.00	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	67.7 PK	74.0	-6.3	1.45 H	65	36.60	31.10
2	2390.00	52.5 AV	54.0	-1.5	1.45 H	65	21.40	31.10
3	*2412.00	105.6 PK			1.42 H	65	74.40	31.20
4	*2412.00	94.8 AV			1.42 H	65	63.60	31.20
5	4824.00	47.6 PK	74.0	-26.4	1.00 H	7	10.70	36.90
6	4824.00	33.5 AV	54.0	-20.5	1.00 H	7	-3.40	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	1.88 V	11	36.40	31.10
2	2390.00	50.5 AV	54.0	-3.5	1.88 V	11	19.40	31.10
3	*2412.00	102.8 PK			1.88 V	11	71.60	31.20
4	*2412.00	91.4 AV			1.88 V	11	60.20	31.20
5	4824.00	46.2 PK	74.0	-27.8	1.15 V	63	9.30	36.90
6	4824.00	33.4 AV	54.0	-20.6	1.15 V	63	-3.50	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	56.3 PK	74.0	-17.7	1.29 H	94	25.20	31.10
2	2390.00	44.7 AV	54.0	-9.3	1.29 H	94	13.60	31.10
3	*2437.00	107.2 PK			1.29 H	96	75.90	31.30
4	*2437.00	95.6 AV			1.29 H	96	64.30	31.30
5	4874.00	45.5 PK	74.0	-28.5	1.00 H	126	8.50	37.00
6	4874.00	32.4 AV	54.0	-21.6	1.00 H	126	-4.60	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	53.8 PK	74.0	-20.2	1.00 V	155	22.70	31.10
2	2390.00	44.9 AV	54.0	-9.1	1.00 V	155	13.80	31.10
3	*2437.00	104.2 PK			1.00 V	155	72.90	31.30
4	*2437.00	93.1 AV			1.00 V	155	61.80	31.30
5	4874.00	43.2 PK	74.0	-30.8	1.00 V	20	6.20	37.00
6	4874.00	33.5 AV	54.0	-20.5	1.00 V	20	-3.50	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	104.9 PK			1.09 H	143	73.50	31.40
2	*2462.00	93.5 AV			1.09 H	143	62.10	31.40
3	2483.50	65.2 PK	74.0	-8.8	1.09 H	145	33.80	31.40
4	2483.50	50.1 AV	54.0	-3.9	1.09 H	145	18.70	31.40
5	4924.00	46.3 PK	74.0	-27.7	1.00 H	352	9.20	37.10
6	4924.00	32.1 AV	54.0	-21.9	1.00 H	352	-5.00	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	102.3 PK			1.58 V	291	70.90	31.40
2	*2462.00	90.8 AV			1.58 V	291	59.40	31.40
3	2483.50	61.7 PK	74.0	-12.3	1.59 V	291	30.30	31.40
4	2483.50	47.8 AV	54.0	-6.2	1.59 V	291	16.40	31.40
5	4924.00	46.5 PK	74.0	-27.5	1.00 V	56	9.40	37.10
6	4924.00	32.8 AV	54.0	-21.2	1.00 V	56	-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.

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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	71.1 PK	74.0	-2.9	1.07 H	183	40.00	31.10
2	2390.00	52.6 AV	54.0	-1.4	1.07 H	183	21.50	31.10
3	*2412.00	103.2 PK			1.06 H	15	72.00	31.20
4	*2412.00	91.9 AV			1.06 H	15	60.70	31.20
5	4824.00	46.4 PK	74.0	-27.6	1.19 H	20	9.50	36.90
6	4824.00	32.3 AV	54.0	-21.7	1.19 H	20	-4.60	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	66.9 PK	74.0	-7.1	1.71 V	285	35.80	31.10
2	2390.00	50.5 AV	54.0	-3.5	1.71 V	285	19.40	31.10
3	*2412.00	101.0 PK			1.71 V	287	69.80	31.20
4	*2412.00	89.7 AV			1.71 V	287	58.50	31.20
5	4824.00	46.3 PK	74.0	-27.7	1.00 V	26	9.40	36.90
6	4824.00	32.3 AV	54.0	-21.7	1.00 V	26	-4.60	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	56.2 PK	74.0	-17.8	1.35 H	96	25.10	31.10
2	2390.00	44.8 AV	54.0	-9.2	1.35 H	96	13.70	31.10
3	*2437.00	107.1 PK			1.35 H	96	75.80	31.30
4	*2437.00	95.4 AV			1.35 H	96	64.10	31.30
5	4874.00	45.9 PK	74.0	-28.1	1.00 H	126	8.90	37.00
6	4874.00	32.5 AV	54.0	-21.5	1.00 H	126	-4.50	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	54.1 PK	74.0	-19.9	1.00 V	139	23.00	31.10
2	2390.00	44.8 AV	54.0	-9.2	1.00 V	139	13.70	31.10
3	*2437.00	103.6 PK			1.00 V	139	72.30	31.30
4	*2437.00	93.2 AV			1.00 V	139	61.90	31.30
5	4874.00	43.1 PK	74.0	-30.9	1.00 V	20	6.10	37.00
6	4874.00	33.5 AV	54.0	-20.5	1.00 V	20	-3.50	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	104.2 PK			1.00 H	138	72.80	31.40
2	*2462.00	91.9 AV			1.00 H	138	60.50	31.40
3	2483.50	65.0 PK	74.0	-9.0	1.00 H	137	33.60	31.40
4	2483.50	49.3 AV	54.0	-4.7	1.00 H	137	17.90	31.40
5	4924.00	46.9 PK	74.0	-27.1	1.66 H	196	9.80	37.10
6	4924.00	32.1 AV	54.0	-21.9	1.66 H	196	-5.00	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	100.3 PK			1.65 V	285	68.90	31.40
2	*2462.00	89.5 AV			1.65 V	285	58.10	31.40
3	2483.50	61.5 PK	74.0	-12.5	1.64 V	285	30.10	31.40
4	2483.50	47.6 AV	54.0	-6.4	1.64 V	285	16.20	31.40
5	4924.00	45.8 PK	74.0	-28.2	1.66 V	91	8.70	37.10
6	4924.00	32.2 AV	54.0	-21.8	1.66 V	91	-4.90	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	65.1 PK	74.0	-8.9	1.38 H	15	34.00	31.10
2	2390.00	52.4 AV	54.0	-1.6	1.38 H	15	21.30	31.10
3	*2412.00	106.4 PK			1.38 H	16	75.20	31.20
4	*2412.00	95.4 AV			1.38 H	16	64.20	31.20
5	4824.00	46.8 PK	74.0	-27.2	1.00 H	16	9.90	36.90
6	4824.00	34.5 AV	54.0	-19.5	1.00 H	16	-2.40	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	55.9 PK	74.0	-18.1	1.10 V	93	24.80	31.10
2	2390.00	45.8 AV	54.0	-8.2	1.10 V	93	14.70	31.10
3	*2412.00	98.4 PK			1.11 V	95	67.20	31.20
4	*2412.00	87.3 AV			1.11 V	95	56.10	31.20
5	4824.00	46.9 PK	74.0	-27.1	1.00 V	33	10.00	36.90
6	4824.00	34.2 AV	54.0	-19.8	1.00 V	33	-2.70	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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2437.00	109.7 PK			1.36 H	320	78.40	31.30
2	*2437.00	98.5 AV			1.36 H	320	67.20	31.30
3	2483.50	64.0 PK	74.0	-10.0	1.36 H	323	32.60	31.40
4	2483.50	46.4 AV	54.0	-7.6	1.36 H	323	15.00	31.40
5	4874.00	50.6 PK	74.0	-23.4	1.33 H	180	13.60	37.00
6	4874.00	35.0 AV	54.0	-19.0	1.33 H	180	-2.00	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	*2437.00	101.7 PK			1.14 V	32	70.40	31.30
2	*2437.00	90.6 AV			1.14 V	32	59.30	31.30
3	2483.50	56.0 PK	74.0	-18.0	1.14 V	76	24.60	31.40
4	2483.50	44.1 AV	54.0	-9.9	1.14 V	76	12.70	31.40
5	4874.00	46.8 PK	74.0	-27.2	1.00 V	6	9.80	37.00
6	4874.00	32.9 AV	54.0	-21.1	1.00 V	6	-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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2462.00	104.8 PK			1.34 H	15	73.40	31.40
2	*2462.00	93.2 AV			1.34 H	15	61.80	31.40
3	2483.50	61.4 PK	74.0	-12.6	1.34 H	14	30.00	31.40
4	2483.50	49.2 AV	54.0	-4.8	1.34 H	14	17.80	31.40
5	4924.00	47.3 PK	74.0	-26.7	1.00 H	25	10.20	37.10
6	4924.00	35.2 AV	54.0	-18.8	1.00 H	25	-1.90	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	94.5 PK			1.11 V	94	63.10	31.40
2	*2462.00	83.8 AV			1.11 V	94	52.40	31.40
3	2483.50	54.7 PK	74.0	-19.3	1.11 V	95	23.30	31.40
4	2483.50	45.0 AV	54.0	-9.0	1.11 V	95	13.60	31.40
5	4924.00	47.2 PK	74.0	-26.8	1.00 V	39	10.10	37.10
6	4924.00	34.5 AV	54.0	-19.5	1.00 V	39	-2.60	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.8 PK	74.0	-3.2	1.05 H	189	39.70	31.10
2	2390.00	52.3 AV	54.0	-1.7	1.05 H	189	21.20	31.10
3	*2412.00	103.8 PK			1.05 H	189	72.60	31.20
4	*2412.00	92.6 AV			1.05 H	189	61.40	31.20
5	4824.00	46.8 PK	74.0	-27.2	1.20 H	24	9.90	36.90
6	4824.00	33.1 AV	54.0	-20.9	1.20 H	24	-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	67.2 PK	74.0	-6.8	1.56 V	293	36.10	31.10
2	2390.00	50.8 AV	54.0	-3.2	1.56 V	293	19.70	31.10
3	*2412.00	101.3 PK			1.56 V	295	70.10	31.20
4	*2412.00	89.6 AV			1.56 V	295	58.40	31.20
5	4824.00	46.5 PK	74.0	-27.5	1.00 V	33	9.60	36.90
6	4824.00	32.5 AV	54.0	-21.5	1.00 V	33	-4.40	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	57.2 PK	74.0	-16.8	1.33 H	56	26.10	31.10
2	2390.00	45.3 AV	54.0	-8.7	1.33 H	56	14.20	31.10
3	*2437.00	107.6 PK			1.33 H	56	76.30	31.30
4	*2437.00	95.4 AV			1.33 H	56	64.10	31.30
5	4874.00	46.2 PK	74.0	-27.8	1.00 H	127	9.20	37.00
6	4874.00	33.2 AV	54.0	-20.8	1.00 H	127	-3.80	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	55.3 PK	74.0	-18.7	1.00 V	141	24.20	31.10
2	2390.00	45.2 AV	54.0	-8.8	1.00 V	141	14.10	31.10
3	*2437.00	105.1 PK			1.00 V	141	73.80	31.30
4	*2437.00	93.3 AV			1.00 V	141	62.00	31.30
5	4874.00	43.5 PK	74.0	-30.5	1.00 V	23	6.50	37.00
6	4874.00	33.7 AV	54.0	-20.3	1.00 V	23	-3.30	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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	103.8 PK			1.00 H	145	72.40	31.40
2	*2462.00	91.5 AV			1.00 H	145	60.10	31.40
3	2483.50	65.3 PK	74.0	-8.7	1.00 H	145	33.90	31.40
4	2483.50	49.8 AV	54.0	-4.2	1.00 H	145	18.40	31.40
5	4924.00	47.5 PK	74.0	-26.5	1.58 H	214	10.40	37.10
6	4924.00	32.6 AV	54.0	-21.4	1.58 H	214	-4.50	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	100.5 PK			1.25 V	264	69.10	31.40
2	*2462.00	89.3 AV			1.25 V	264	57.90	31.40
3	2483.50	61.5 PK	74.0	-12.5	1.25 V	264	30.10	31.40
4	2483.50	47.2 AV	54.0	-6.8	1.25 V	264	15.80	31.40
5	4924.00	46.2 PK	74.0	-27.8	1.59 V	94	9.10	37.10
6	4924.00	32.8 AV	54.0	-21.2	1.59 V	94	-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.

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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	67.1 PK	74.0	-6.9	2.03 H	13	36.00	31.10
2	2390.00	53.0 AV	54.0	-1.0	2.03 H	13	21.90	31.10
3	*2422.00	95.8 PK			2.01 H	8	64.60	31.20
4	*2422.00	84.9 AV			2.01 H	8	53.70	31.20
5	4844.00	46.7 PK	74.0	-27.3	1.53 H	54	9.80	36.90
6	4844.00	32.0 AV	54.0	-22.0	1.53 H	54	-4.90	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	63.3 PK	74.0	-10.7	1.05 V	283	32.20	31.10
2	2390.00	49.4 AV	54.0	-4.6	1.05 V	283	18.30	31.10
3	*2422.00	93.7 PK			1.02 V	285	62.50	31.20
4	*2422.00	82.1 AV			1.02 V	285	50.90	31.20
5	4844.00	45.8 PK	74.0	-28.2	1.15 V	221	8.90	36.90
6	4844.00	32.0 AV	54.0	-22.0	1.15 V	221	-4.90	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 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	60.5 PK	74.0	-13.5	1.01 H	144	29.40	31.10
2	2390.00	47.2 AV	54.0	-6.8	1.01 H	144	16.10	31.10
3	*2437.00	95.4 PK			1.00 H	137	64.10	31.30
4	*2437.00	84.7 AV			1.00 H	137	53.40	31.30
5	4874.00	45.9 PK	74.0	-28.1	1.21 H	274	8.90	37.00
6	4874.00	32.8 AV	54.0	-21.2	1.21 H	274	-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	59.6 PK	74.0	-14.4	1.05 V	284	28.50	31.10
2	2390.00	46.1 AV	54.0	-7.9	1.05 V	284	15.00	31.10
3	*2437.00	94.8 PK			1.04 V	282	63.50	31.30
4	*2437.00	83.5 AV			1.04 V	282	52.20	31.30
5	4874.00	46.0 PK	74.0	-28.0	1.00 V	54	9.00	37.00
6	4874.00	32.5 AV	54.0	-21.5	1.00 V	54	-4.50	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 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2452.00	95.3 PK			1.00 H	137	64.00	31.30
2	*2452.00	84.6 AV			1.00 H	137	53.30	31.30
3	2483.50	63.7 PK	74.0	-10.3	1.00 H	139	32.30	31.40
4	2483.50	48.6 AV	54.0	-5.4	1.00 H	139	17.20	31.40
5	4904.00	45.8 PK	74.0	-28.2	1.21 H	274	8.80	37.00
6	4904.00	32.5 AV	54.0	-21.5	1.21 H	274	-4.50	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	93.4 PK			1.64 V	286	62.10	31.30
2	*2452.00	82.3 AV			1.64 V	286	51.00	31.30
3	2483.50	60.9 PK	74.0	-13.1	1.63 V	283	29.50	31.40
4	2483.50	47.5 AV	54.0	-6.5	1.63 V	283	16.10	31.40
5	4904.00	47.3 PK	74.0	-26.7	1.37 V	280	10.30	37.00
6	4904.00	32.5 AV	54.0	-21.5	1.37 V	280	-4.50	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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	2390.00	63.8 PK	74.0	-10.2	1.41 H	14	32.70	31.10
2	2390.00	52.6 AV	54.0	-1.4	1.41 H	14	21.50	31.10
3	*2422.00	98.0 PK			1.41 H	360	66.80	31.20
4	*2422.00	87.5 AV			1.41 H	360	56.30	31.20
5	4844.00	45.8 PK	74.0	-28.2	1.00 H	5	8.90	36.90
6	4844.00	32.7 AV	54.0	-21.3	1.00 H	5	-4.20	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	55.9 PK	74.0	-18.1	1.12 V	95	24.80	31.10
2	2390.00	45.0 AV	54.0	-9.0	1.12 V	95	13.90	31.10
3	*2422.00	89.0 PK			1.12 V	94	57.80	31.20
4	*2422.00	77.6 AV			1.12 V	94	46.40	31.20
5	4844.00	46.9 PK	74.0	-27.1	1.00 V	52	10.00	36.90
6	4844.00	33.0 AV	54.0	-21.0	1.00 V	52	-3.90	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 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2437.00	99.6 PK			1.37 H	20	68.30	31.30
2	*2437.00	88.1 AV			1.37 H	20	56.80	31.30
3	2483.50	55.7 PK	74.0	-18.3	1.37 H	19	24.30	31.40
4	2483.50	45.9 AV	54.0	-8.1	1.37 H	19	14.50	31.40
5	4874.00	46.3 PK	74.0	-27.7	1.00 H	9	9.30	37.00
6	4874.00	33.8 AV	54.0	-20.2	1.00 H	9	-3.20	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	*2437.00	87.2 PK			1.13 V	94	55.90	31.30
2	*2437.00	76.9 AV			1.13 V	94	45.60	31.30
3	2483.50	54.5 PK	74.0	-19.5	1.13 V	95	23.10	31.40
4	2483.50	44.4 AV	54.0	-9.6	1.13 V	95	13.00	31.40
5	4874.00	47.2 PK	74.0	-26.8	1.01 V	36	10.20	37.00
6	4874.00	33.8 AV	54.0	-20.2	1.01 V	36	-3.20	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	25deg. C, 65%RH	TESTED BY	Antony Lee
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	*2452.00	96.7 PK			1.35 H	356	65.40	31.30
2	*2452.00	86.0 AV			1.35 H	356	54.70	31.30
3	2483.50	58.3 PK	74.0	-15.7	1.35 H	352	26.90	31.40
4	2483.50	47.3 AV	54.0	-6.7	1.35 H	352	15.90	31.40
5	4904.00	46.8 PK	74.0	-27.2	1.00 H	5	9.80	37.00
6	4904.00	33.8 AV	54.0	-20.2	1.00 H	5	-3.20	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	*2452.00	86.6 PK			1.06 V	96	55.30	31.30
2	*2452.00	75.9 AV			1.06 V	96	44.60	31.30
3	2483.50	54.9 PK	74.0	-19.1	1.05 V	97	23.50	31.40
4	2483.50	45.0 AV	54.0	-9.0	1.05 V	97	13.60	31.40
5	4904.00	47.6 PK	74.0	-26.4	1.00 V	33	10.60	37.00
6	4904.00	33.5 AV	54.0	-20.5	1.00 V	33	-3.50	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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	64.3 PK	74.0	-9.7	2.15 H	78	33.20	31.10
2	2390.00	52.8 AV	54.0	-1.2	2.15 H	78	21.70	31.10
3	*2422.00	97.3 PK			2.15 H	78	66.10	31.20
4	*2422.00	86.1 AV			2.15 H	78	54.90	31.20
5	4844.00	47.2 PK	74.0	-26.8	1.52 H	69	10.30	36.90
6	4844.00	33.4 AV	54.0	-20.6	1.52 H	69	-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	64.5 PK	74.0	-9.5	1.04 V	75	33.40	31.10
2	2390.00	50.5 AV	54.0	-3.5	1.04 V	75	19.40	31.10
3	*2422.00	93.5 PK			1.04 V	75	62.30	31.20
4	*2422.00	82.2 AV			1.04 V	75	51.00	31.20
5	4844.00	46.2 PK	74.0	-27.8	1.20 V	236	9.30	36.90
6	4844.00	32.5 AV	54.0	-21.5	1.20 V	236	-4.40	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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	63.5 PK	74.0	-10.5	1.00 H	236	32.40	31.10
2	2390.00	49.4 AV	54.0	-4.6	1.00 H	236	18.30	31.10
3	*2437.00	98.0 PK			1.35 H	300	66.70	31.30
4	*2437.00	86.6 AV			1.35 H	300	55.30	31.30
5	4874.00	47.2 PK	74.0	-26.8	1.00 H	296	10.20	37.00
6	4874.00	33.5 AV	54.0	-20.5	1.00 H	296	-3.50	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	60.3 PK	74.0	-13.7	1.02 V	288	29.20	31.10
2	2390.00	47.5 AV	54.0	-6.5	1.02 V	288	16.40	31.10
3	*2437.00	95.2 PK			1.03 V	285	63.90	31.30
4	*2437.00	84.6 AV			1.03 V	285	53.30	31.30
5	4874.00	46.5 PK	74.0	-27.5	1.00 V	55	9.50	37.00
6	4874.00	33.2 AV	54.0	-20.8	1.00 V	55	-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	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

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	95.3 PK			1.00 H	147	64.00	31.30
2	*2452.00	84.2 AV			1.00 H	147	52.90	31.30
3	2483.50	63.5 PK	74.0	-10.5	1.00 H	147	32.10	31.40
4	2483.50	48.6 AV	54.0	-5.4	1.00 H	147	17.20	31.40
5	4904.00	46.2 PK	74.0	-27.8	1.25 H	36	9.20	37.00
6	4904.00	33.4 AV	54.0	-20.6	1.25 H	36	-3.60	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	92.8 PK			1.55 V	293	61.50	31.30
2	*2452.00	81.4 AV			1.55 V	293	50.10	31.30
3	2483.50	61.2 PK	74.0	-12.8	1.55 V	293	29.80	31.40
4	2483.50	47.3 AV	54.0	-6.7	1.55 V	293	15.90	31.40
5	4904.00	47.5 PK	74.0	-26.5	1.33 V	285	10.50	37.00
6	4904.00	32.4 AV	54.0	-21.6	1.33 V	285	-4.60	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 : 802.11n (20MHz)

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	TESTED BY	Kay Wu
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	166.00	24.7 QP	43.5	-18.8	1.50 H	193	10.70	14.00
2	204.89	31.3 QP	43.5	-12.2	1.00 H	331	20.70	10.60
3	232.11	30.4 QP	46.0	-15.6	1.50 H	331	18.40	12.00
4	480.97	29.1 QP	46.0	-16.9	1.50 H	232	9.40	19.70
5	640.41	29.4 QP	46.0	-16.6	1.00 H	232	6.30	23.10
6	720.12	35.6 QP	46.0	-10.4	1.00 H	238	11.30	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	19.1 QP	40.0	-20.9	2.00 V	64	4.80	14.30
2	202.94	21.0 QP	43.5	-22.5	1.50 V	283	10.50	10.50
3	235.99	20.1 QP	46.0	-25.9	1.50 V	274	7.80	12.30
4	480.97	27.1 QP	46.0	-18.9	2.00 V	253	7.40	19.70
5	724.01	29.2 QP	46.0	-16.8	1.00 V	280	4.80	24.40
6	867.89	38.2 QP	46.0	-7.8	1.00 V	343	11.80	26.40

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu
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	202.94	31.0 QP	43.5	-12.5	1.00 H	343	20.50	10.50
2	234.05	31.5 QP	46.0	-14.5	1.50 H	196	19.30	12.20
3	432.37	22.8 QP	46.0	-23.2	1.00 H	127	4.20	18.60
4	480.97	28.1 QP	46.0	-17.9	1.50 H	238	8.10	20.00
5	720.12	36.6 QP	46.0	-9.4	1.00 H	238	11.60	25.00
6	960.00	28.9 QP	46.0	-17.1	1.50 H	19	0.60	28.30
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	202.94	20.9 QP	43.5	-22.6	1.50 V	283	10.40	10.50
2	232.11	19.7 QP	46.0	-26.3	1.50 V	262	7.60	12.10
3	366.26	15.7 QP	46.0	-30.3	1.50 V	229	-1.10	16.80
4	432.37	21.6 QP	46.0	-24.4	1.50 V	316	3.00	18.60
5	480.97	24.7 QP	46.0	-21.3	2.00 V	274	4.70	20.00
6	718.18	30.0 QP	46.0	-16.0	2.00 V	268	5.00	25.00

- 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.

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	TESTED BY	Kay Wu
TEST MODE	C		

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	191.28	41.2 QP	43.5	-2.3	1.25 H	169	29.80	11.40
2	199.05	41.1 QP	43.5	-2.4	2.00 H	127	30.60	10.50
3	235.10	43.0 QP	46.0	-3.0	1.07 H	0	30.70	12.30
4	265.16	40.1 QP	46.0	-5.9	1.00 H	283	26.40	13.70
5	529.58	34.9 QP	46.0	-11.1	1.75 H	43	13.70	21.20
6	963.16	41.2 QP	54.0	-12.8	1.50 H	292	12.80	28.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	47.40	29.5 QP	40.0	-10.5	1.25 V	88	15.10	14.40
2	237.94	33.6 QP	46.0	-12.4	1.75 V	250	21.20	12.40
3	375.98	30.6 QP	46.0	-15.4	1.25 V	220	13.60	17.00
4	529.58	31.8 QP	46.0	-14.2	1.50 V	13	10.60	21.20
5	601.52	35.1 QP	46.0	-10.9	1.00 V	34	12.20	22.90
6	963.16	42.1 QP	54.0	-11.9	1.50 V	298	13.70	28.40

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

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	100291	Nov. 30, 2010	Nov. 29, 2011
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 30, 2010	Dec. 29, 2011
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 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_Conc_ V7.3.7	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

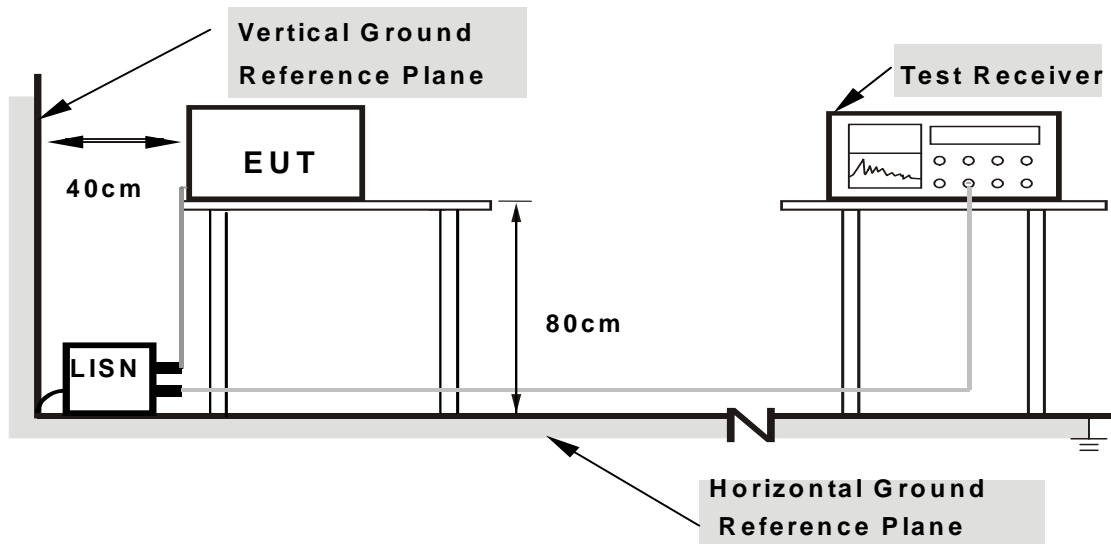
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

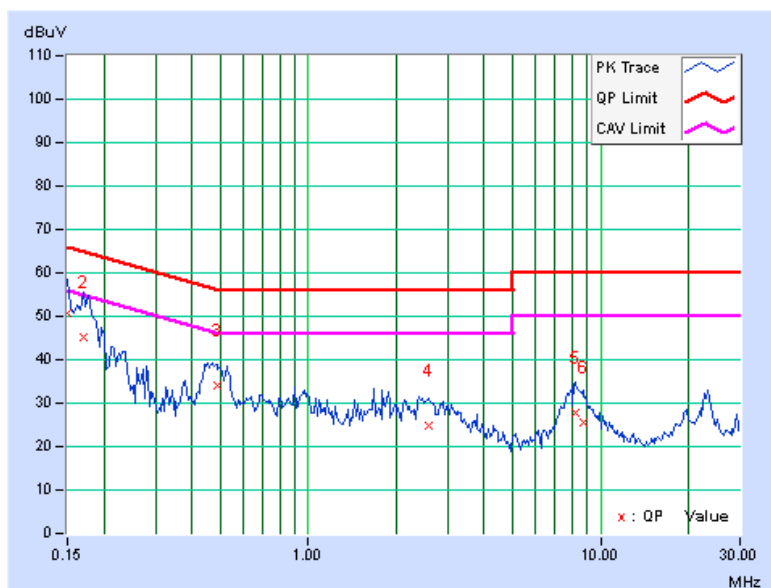
4.2.7 TEST RESULTS

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

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	50.59	34.03	50.71	34.15	66.00	56.00	-15.29	-21.85
2	0.170	0.12	45.09	25.05	45.21	25.17	64.98	54.98	-19.78	-29.82
3	0.486	0.13	33.82	24.97	33.95	25.10	56.24	46.24	-22.29	-21.14
4	2.570	0.22	24.63	16.11	24.85	16.33	56.00	46.00	-31.15	-29.67
5	8.211	0.56	27.34	19.19	27.90	19.75	60.00	50.00	-32.10	-30.25
6	8.730	0.59	25.09	17.39	25.68	17.98	60.00	50.00	-34.32	-32.02

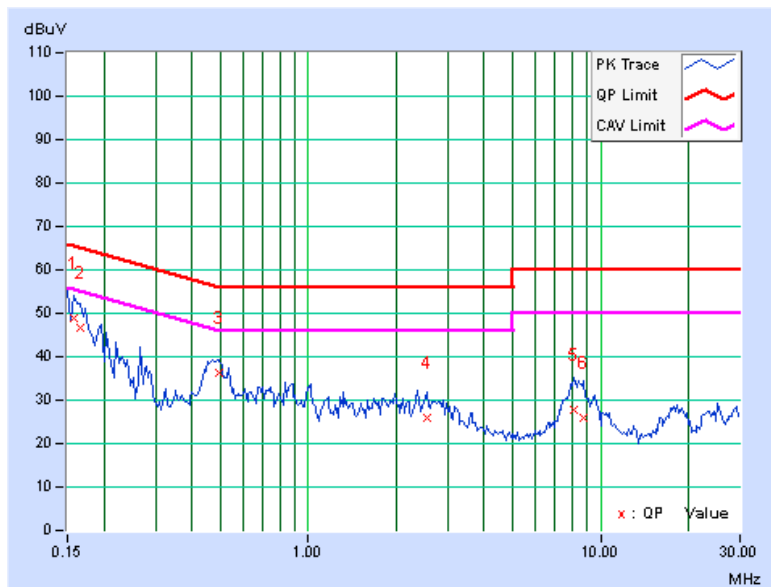
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.13	48.93	32.87	49.06	33.00	65.58	55.58	-16.52	-22.58
2	0.166	0.13	46.59	28.60	46.72	28.73	65.18	55.18	-18.46	-26.45
3	0.494	0.15	36.05	24.13	36.20	24.28	56.10	46.10	-19.91	-21.83
4	2.551	0.23	25.57	17.14	25.80	17.37	56.00	46.00	-30.20	-28.63
5	8.094	0.52	27.21	19.26	27.73	19.78	60.00	50.00	-32.27	-30.22
6	8.801	0.55	25.31	17.89	25.86	18.44	60.00	50.00	-34.14	-31.56

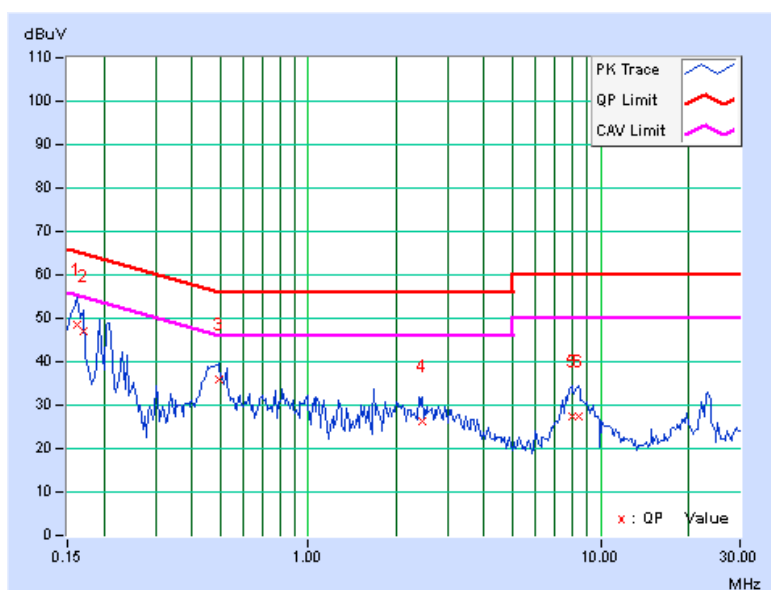
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.12	48.39	32.11	48.51	32.23	65.38	55.38	-16.87	-23.15
2	0.170	0.12	46.82	27.08	46.94	27.20	64.98	54.98	-18.05	-27.79
3	0.494	0.13	35.81	23.77	35.94	23.90	56.10	46.10	-20.17	-22.21
4	2.461	0.22	26.24	16.35	26.46	16.57	56.00	46.00	-29.54	-29.43
5	7.977	0.54	26.91	18.80	27.45	19.34	60.00	50.00	-32.55	-30.66
6	8.371	0.56	26.90	19.05	27.46	19.61	60.00	50.00	-32.54	-30.39

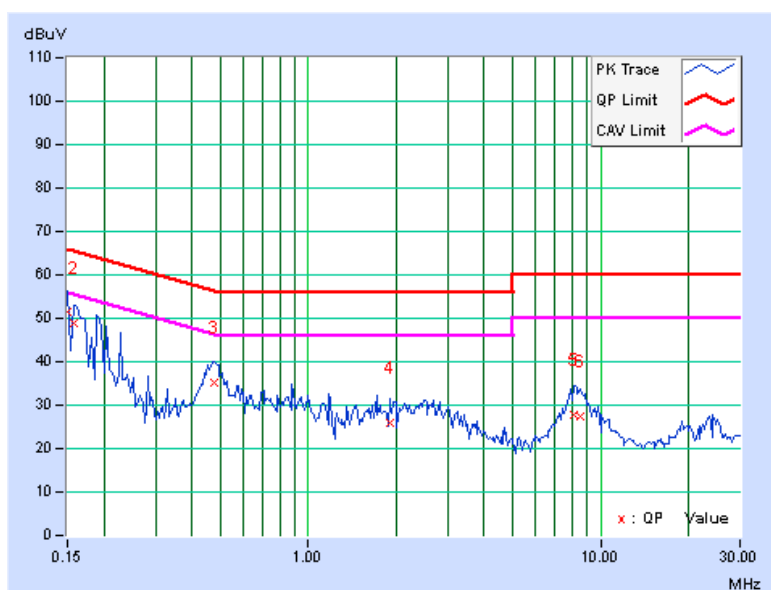
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.12	51.43	35.26	51.55	35.38	66.00	56.00	-14.45	-20.62
2	0.158	0.13	48.87	32.53	49.00	32.66	65.58	55.58	-16.58	-22.92
3	0.478	0.15	35.14	25.55	35.29	25.70	56.37	46.37	-21.09	-20.68
4	1.902	0.20	25.70	15.09	25.90	15.29	56.00	46.00	-30.10	-30.71
5	8.145	0.52	27.40	20.10	27.92	20.62	60.00	50.00	-32.08	-29.38
6	8.477	0.54	26.83	19.18	27.37	19.72	60.00	50.00	-32.63	-30.28

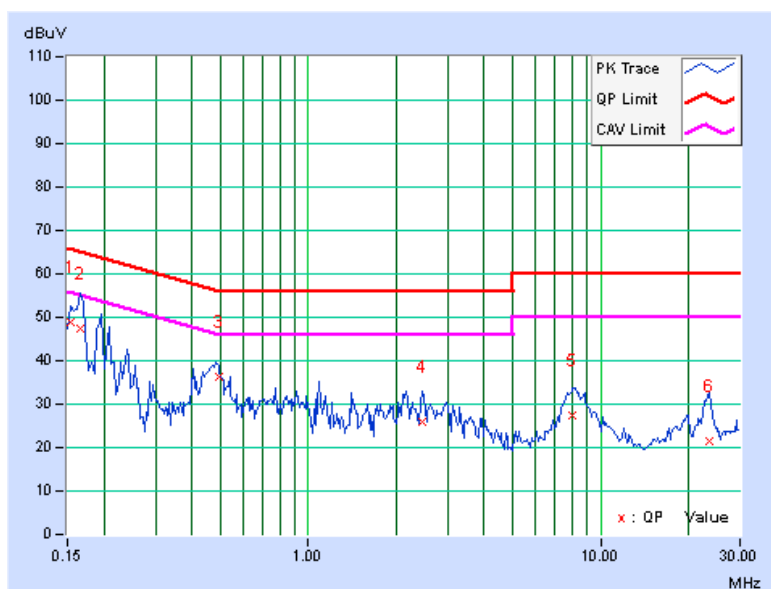
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.12	48.61	33.75	48.73	33.87	65.79	55.79	-17.06	-21.92
2	0.166	0.12	47.46	29.89	47.58	30.01	65.18	55.18	-17.60	-25.17
3	0.494	0.13	36.09	23.75	36.22	23.88	56.10	46.10	-19.89	-22.23
4	2.457	0.22	25.89	16.49	26.11	16.71	56.00	46.00	-29.89	-29.29
5	8.016	0.54	27.03	19.06	27.57	19.60	60.00	50.00	-32.43	-30.40
6	23.625	1.30	20.00	9.79	21.30	11.09	60.00	50.00	-38.70	-38.91

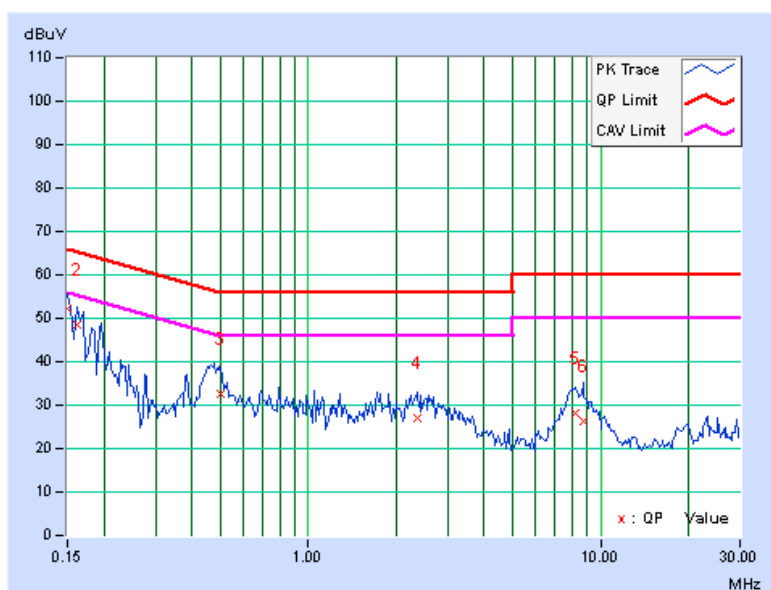
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.12	52.09	35.73	52.21	35.85	66.00	56.00	-13.79	-20.15
2	0.162	0.13	48.35	31.93	48.48	32.06	65.38	55.38	-16.90	-23.32
3	0.502	0.15	32.50	22.36	32.65	22.51	56.00	46.00	-23.35	-23.49
4	2.355	0.22	26.69	17.60	26.91	17.82	56.00	46.00	-29.09	-28.18
5	8.230	0.52	27.70	19.92	28.22	20.44	60.00	50.00	-31.78	-29.56
6	8.746	0.55	25.88	18.25	26.43	18.80	60.00	50.00	-33.57	-31.20

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

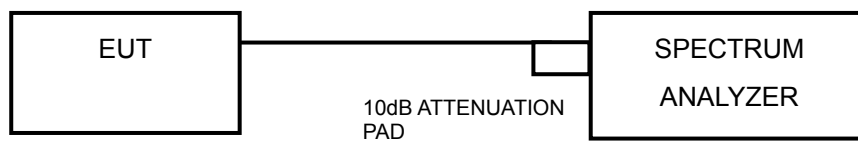


4.3 6dB BANDWIDTH MEASUREMENT

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

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	12.27	0.5	PASS
6	2437	12.25	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	16.65	0.5	PASS
6	2437	16.57	0.5	PASS
11	2462	16.55	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.75	0.5	PASS
6	2437	17.88	0.5	PASS
11	2462	17.84	0.5	PASS

802.11n (40MHz)

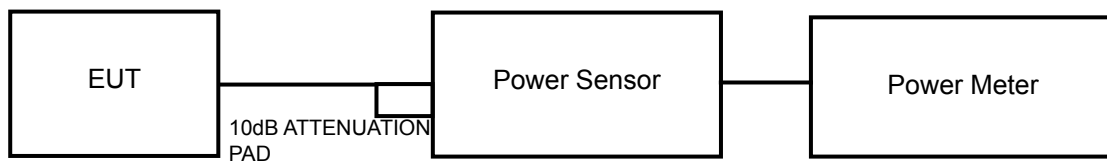
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	36.48	0.5	PASS
4	2437	37.00	0.5	PASS
7	2452	36.91	0.5	PASS

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

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	128.8	21.1	30	PASS
11	2462	77.6	18.9	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	257.0	24.1	30	PASS
6	2437	398.1	26.0	30	PASS
11	2462	131.8	21.2	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	162.2	22.1	30	PASS
6	2437	512.9	27.1	30	PASS
11	2462	107.2	20.3	30	PASS

802.11n (40MHz)

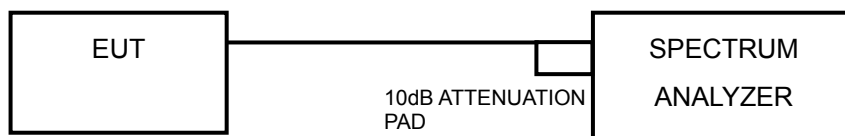
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2422	55.0	17.4	30	PASS
4	2437	67.6	18.3	30	PASS
7	2452	39.8	16.0	30	PASS

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

802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	7.29	-7.94	8	PASS
6	2437	8.28	-6.95	8	PASS
11	2462	6.22	-9.01	8	PASS

802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	2.94	-12.29	8	PASS
6	2437	4.88	-10.35	8	PASS
11	2462	0.03	-15.20	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	1.11	-14.12	8	PASS
6	2437	5.99	-9.24	8	PASS
11	2462	-0.88	-16.11	8	PASS

802.11n (40MHz)

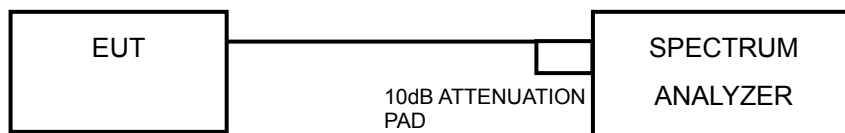
Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2422	-7.23	-22.46	8	PASS
4	2437	-6.22	-21.45	8	PASS
7	2452	-8.41	-23.64	8	PASS

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 OOB

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

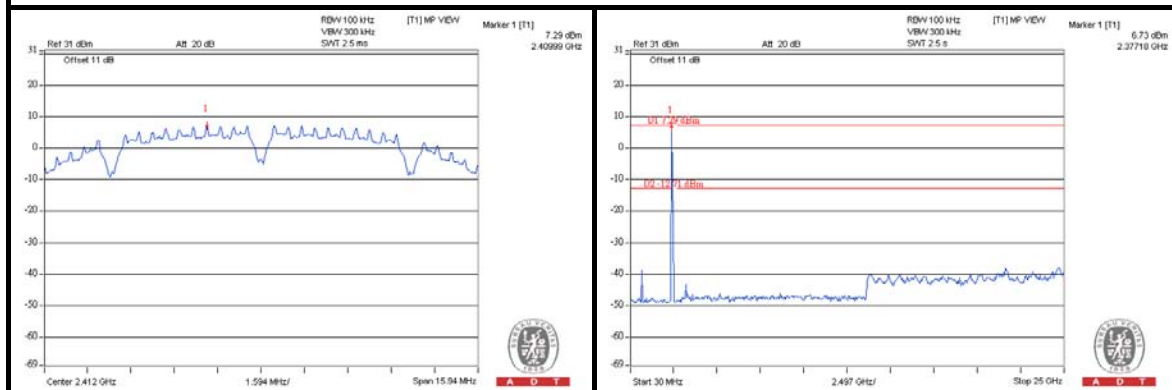
4.6.7 TEST RESULTS

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.

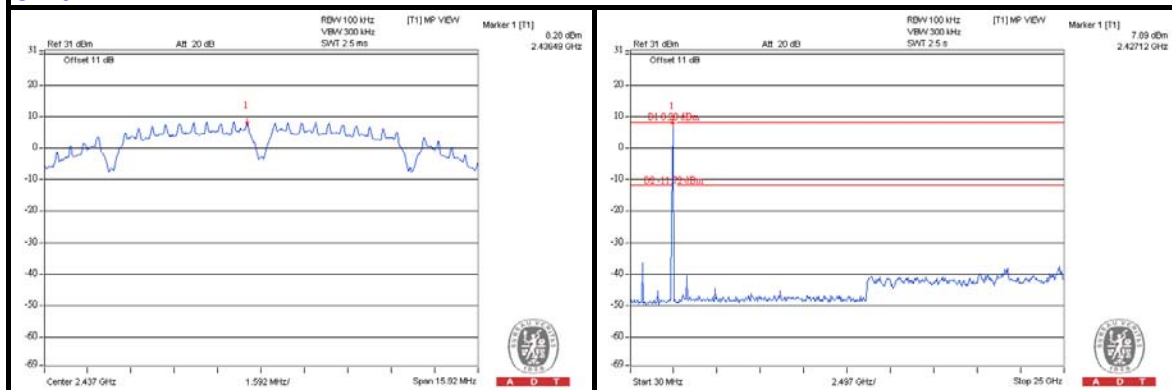
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b

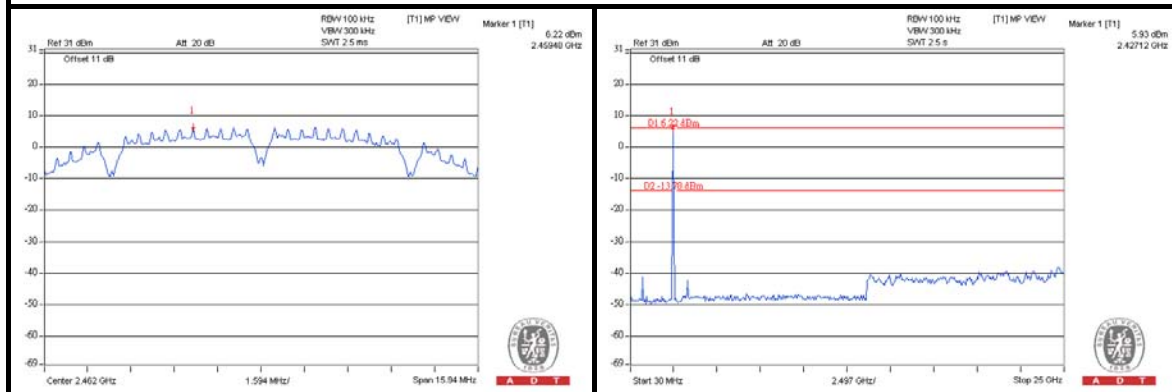
CH 1



CH 6



CH 11

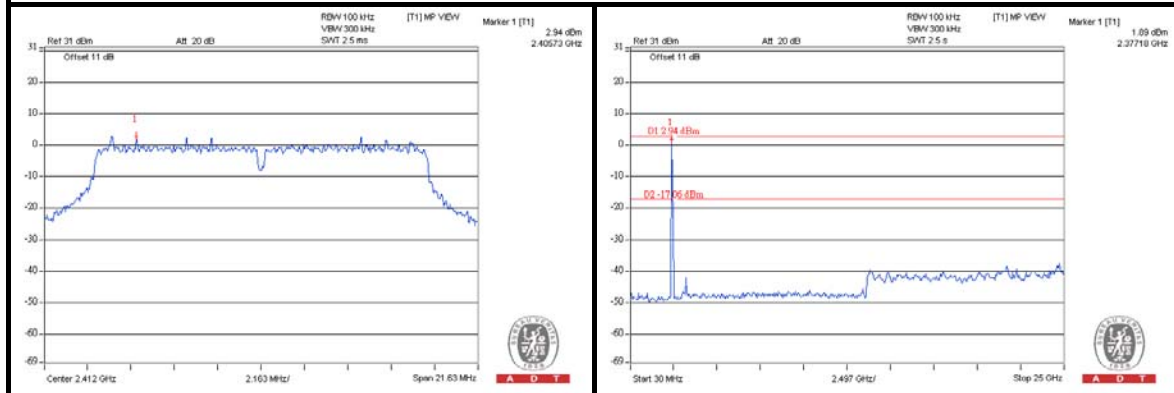




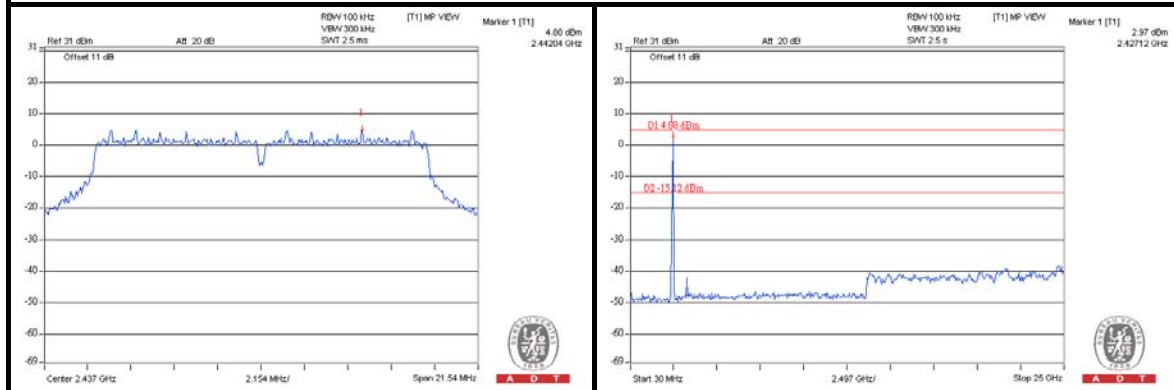
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802.11g

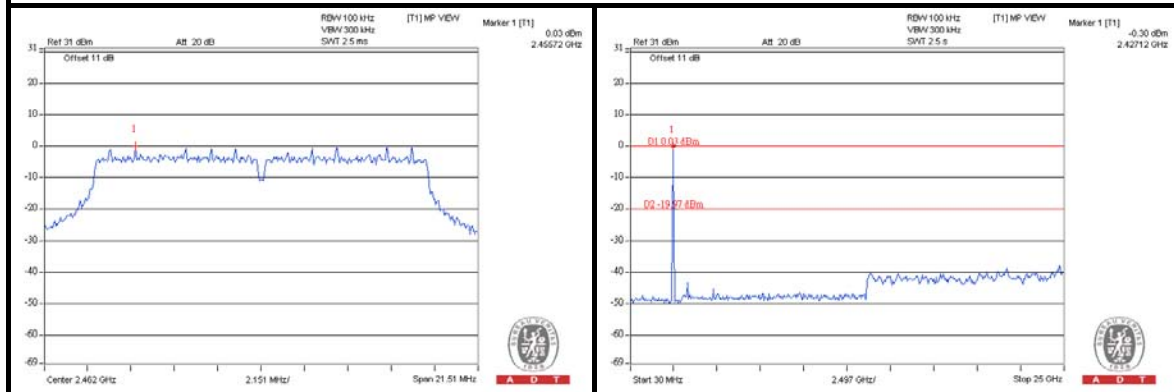
CH 1



CH 6

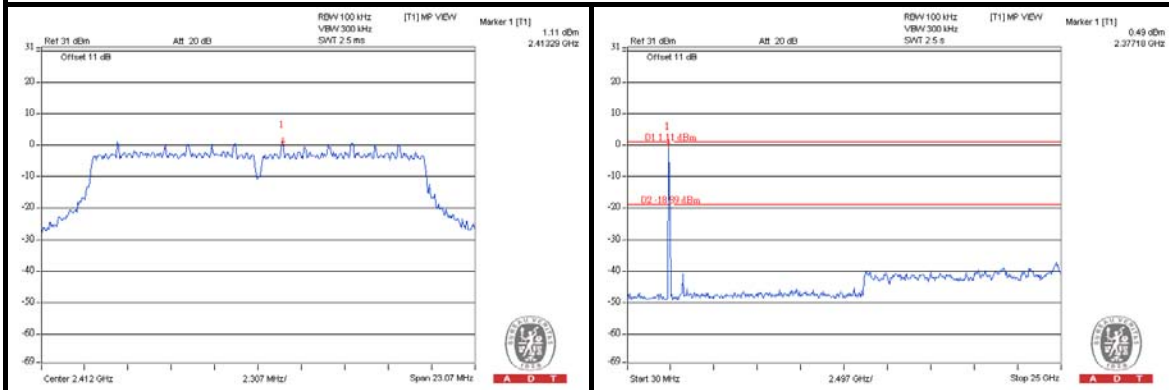


CH 11

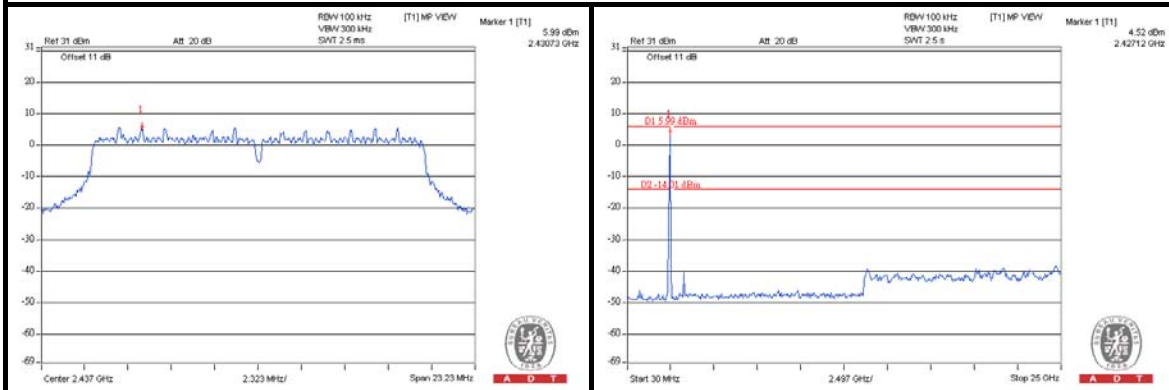


802.11n (20MHz)

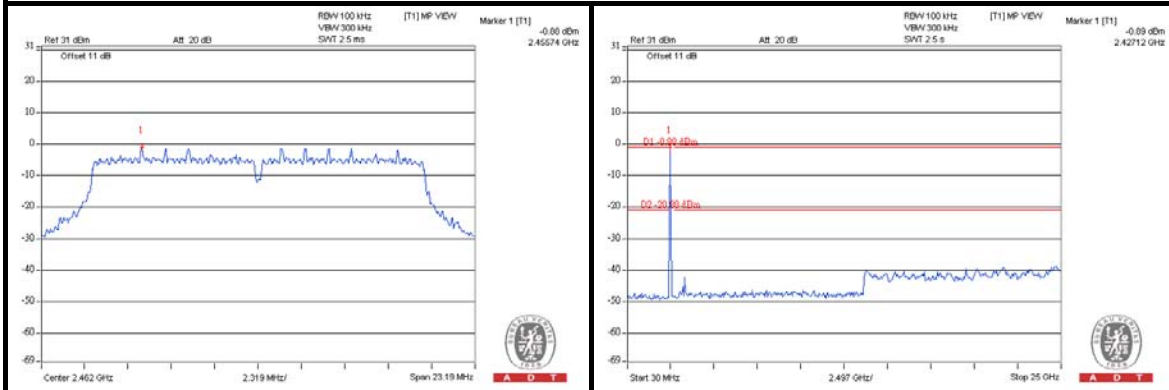
CH 1



CH 6

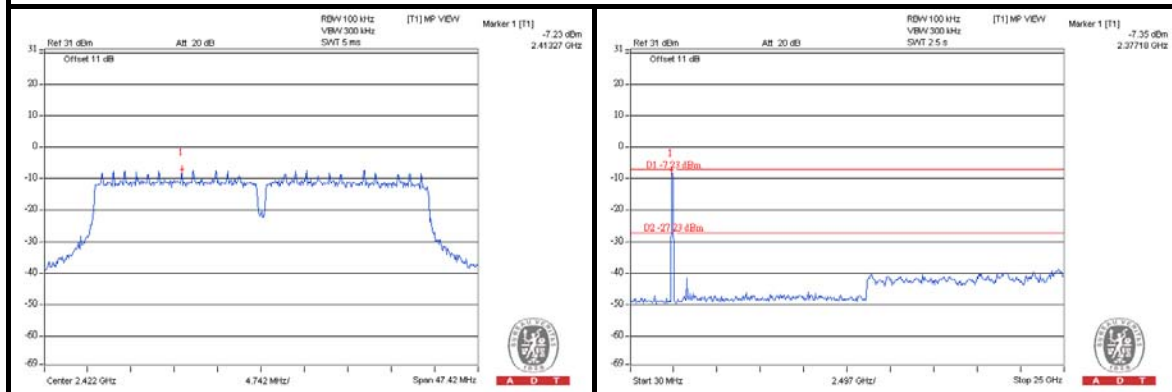


CH 11

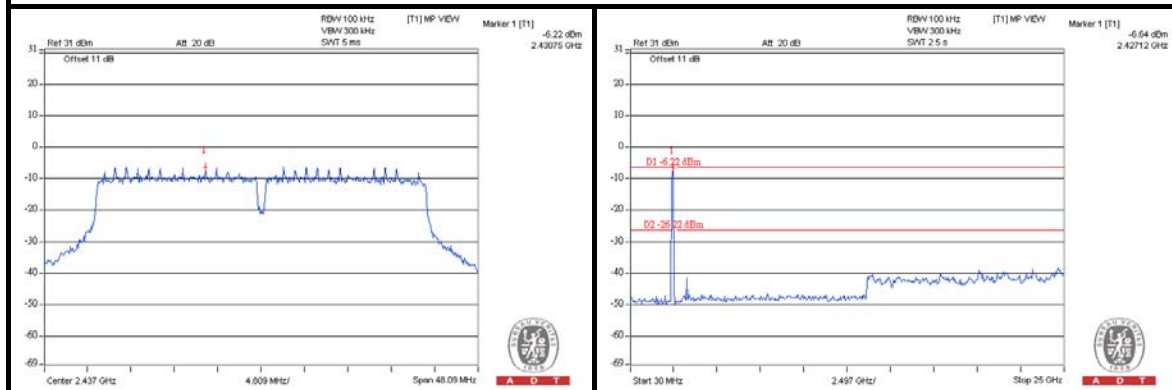


802.11n (40MHz)

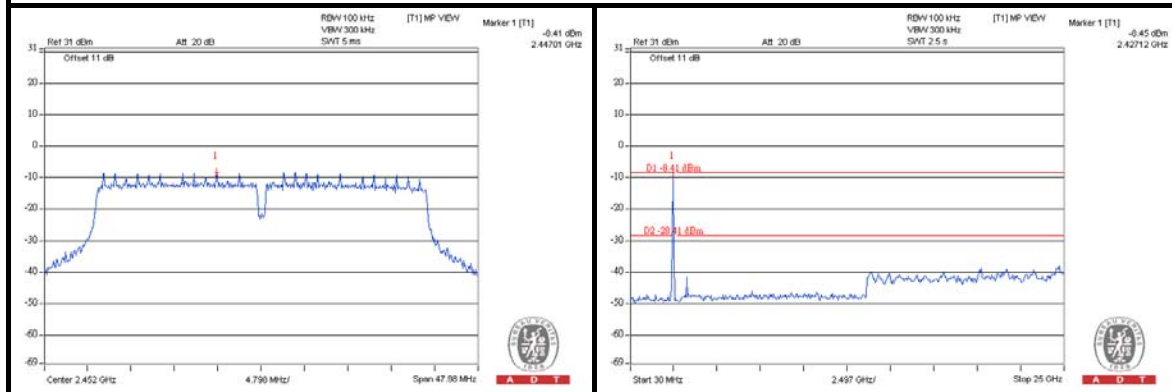
CH 1



CH 4



CH 7





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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.



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

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

---END---