



FCC TEST REPORT

REPORT NO.: RF960807L13-2

MODEL NO.: DIR-855

RECEIVED: Aug. 08, 2007

TESTED: Nov. 21 ~ Nov. 22, 2007

ISSUED: Nov. 27, 2007

APPLICANT: D-Link Corporation

ADDRESS: 17595 Mt. Herrmann, Fountain Valley, CA
92708, U.S.A.

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou
Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

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

This test report consists of 31 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by TAF, A2LA or any government agencies. The test results in the report only apply to the tested sample.





TABLE OF CONTENTS

1.	CERTIFICATION.....	3
2.	SUMMARY OF TEST RESULTS	4
2.1	MEASUREMENT UNCERTAINTY	4
3.	GENERAL INFORMATION.....	5
3.1	GENERAL DESCRIPTION OF EUT	5
3.2	DESCRIPTION OF TEST MODES	6
3.2.1	CONFIGURATION OF SYSTEM UNDER TEST	7
3.2.2	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	8
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	10
3.4	DESCRIPTION OF SUPPORT UNITS	10
4.	TEST TYPES AND RESULTS	11
4.1	RADIATED EMISSION MEASUREMENT	11
4.1.1	LIMITS OF RADIATED EMISSION MEASUREMENT	11
4.1.2	TEST INSTRUMENTS.....	12
4.1.3	TEST PROCEDURES	13
4.1.4	DEVIATION FROM TEST STANDARD	13
4.1.5	TEST SETUP.....	14
4.1.6	EUT OPERATING CONDITIONS	14
4.1.7	TEST RESULTS	15
4.2	CONDUCTED EMISSION MEASUREMENT	24
4.2.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	24
4.2.2	TEST INSTRUMENTS.....	24
4.2.3	TEST PROCEDURES	25
4.2.4	DEVIATION FROM TEST STANDARD	25
4.2.5	TEST SETUP.....	26
4.2.6	EUT OPERATING CONDITIONS	26
4.2.7	TEST RESULTS	27
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	29
6.	INFORMATION ON THE TESTING LABORATORIES	30
7.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB.....	31



1. CERTIFICATION

PRODUCT: Xtreme N DUO Media Router

MODEL: DIR-855

BRAND: D-Link

APPLICANT: D-Link Corporation

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: Aug. 09 ~ Aug. 15, 2007

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

FCC Part 15, Subpart E (Section 15.407)

ANSI C63.4-2003

The above equipment (Model: DIR-855) has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE:** Nov. 27, 2007
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Nov. 27, 2007
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Nov. 27, 2007
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
Standard Section	Test Type and Limit	Result	Remark
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -6.42dB at 0.186MHz
15.247(d) 15.407(b/1/2/3) (b)(5)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -2.27dB at 250.00MHz

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Xtreme N DUO Media Router
MODEL NO.	DIR-855
FCC ID	KA2DIR855A1
POWER SUPPLY	12Vdc from AC Adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n (20MHz): 130.0/ 117.0/ 104.0/ 78.0/ 52.0/ 39.0/ 26.0/ 13.0/ 65.0/ 58.5/ 52.0/ 29.0/ 26.0/ 19.5/ 13.0/ 6.5Mbps Draft 802.11n (40MHz): 270.0/ 243.0/ 216.0/ 162.0/ 108.0/ 81.0/ 54.0/ 27.0 /135.0/ 121.5/ 108.0/ 81.0/ 54.0/ 40.5/ 27.0/ 13.5Mbps
FREQUENCY RANGE	2.4GHz: 2400 ~ 2483.5MHz 5.0GHz: 5150 ~ 5250MHz, 5725 ~ 5850MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz) 5.0GHz: 5150 ~ 5250MHz: 4 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz) 5725 ~ 5850MHz: 5 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz)
OUTPUT POWER	98.015mW for 2400 ~ 2483.5MHz 41.489mW for 5150 ~ 5250MHz 147.892mW for 5725 ~ 5850MHz
ANTENNA TYPE	Dipole antenna with 2.0dBi gain
DATA CABLE	NA
I/O PORTS	RJ45, USB console port
ASSOCIATED DEVICES	Adapter

NOTE:

1. This report only covered the combinations for the test of co-location listed.
2. For this EUT with two antennas that was only different in color of appearance and manufacture. After pre-tested found black one was the worst and presented in the test report.
3. The EUT was operated with following adapter.

BRAND:	D-Link
MODEL:	AG2412-B
INPUT:	100-240Vac, 50-60Hz, 0.5A
OUTPUT:	12Vdc, 2A
POWER LINE:	1.8m non-shielded cable without core

4. The USB console port without any function.
5. The EUT incorporates a MIMO function. Physically, the card provides three completed transmitters and three receivers.
6. The EUT with following module cards:

MODULE CARDS	REMARKS
A	With 802.11b, 802.11g, and 802.11n function
B	With 802.11a, 802.11b, 802.11g and 802.11n function

**For the module cards B, all the function of 2.4GHz will be closed by software.

7. For the 802.11n, the EUT is 3 * 3 spatial MIMO (3Tx & 3Rx) without beam forming function.
8. When the EUT operating in 802.11b, 802.11g, 802.11a, the software operation, which is defined by manufacturer, only set single Tx.
9. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, only set 0 ~ 15 of "MCS" (MCS: Modulation and Coding Schemes) for Triple Tx.
10. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g, 802.11a products.
11. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 270Mbps.
12. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

FOR 2.4GHz:

11 channels are provided for 802.11b, 802.11g, draft 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 draft 802.11n (40MHz):

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

Operated in 5150 ~ 5250MHz, 5470 ~ 5725MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5180 MHz	3	5220 MHz
2	5200 MHz	4	5240 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5190 MHz	2	5230 MHz

FOR 5725 ~ 5850MHz:

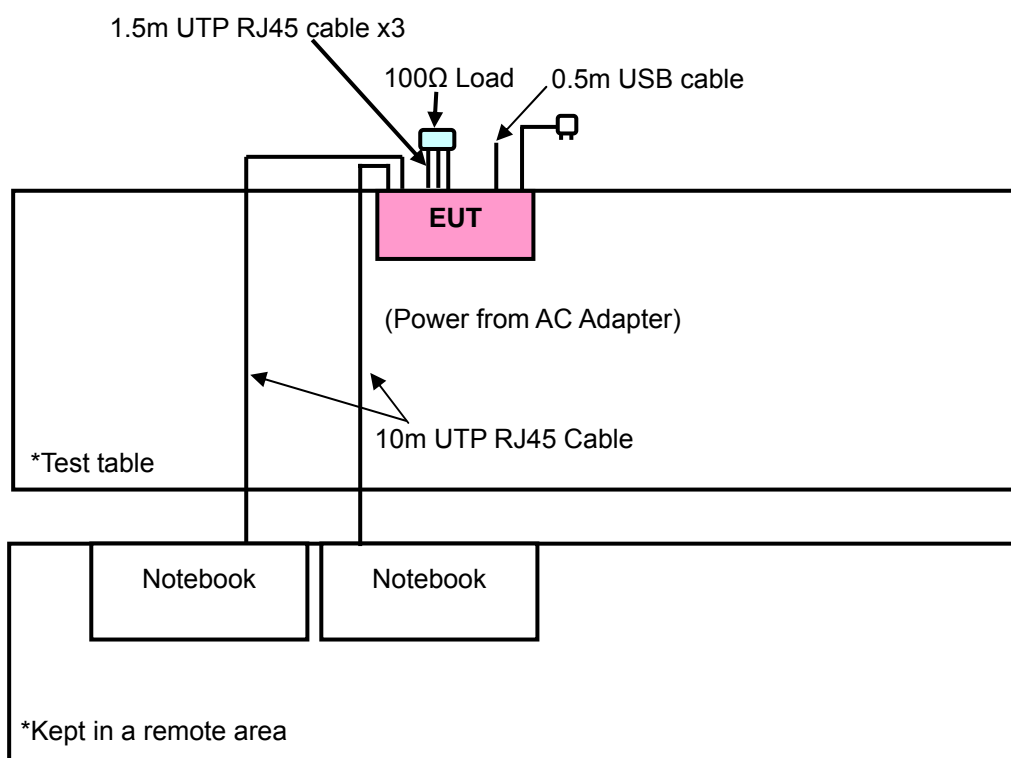
5 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5745MHz	4	5805MHz
2	5765MHz	5	5825MHz
3	5785MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5755MHz	2	5795MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	PLC	RE<1G	RE≥1G	
A	-	-	√	11g + 11a (5150-5350)
B	-	-	√	11g + 11an (40MHz) (5150-5350)
C	-	-	√	11g + 11a (5725-5850)
D	-	-	√	11g + 11an (20MHz) (5725-5850)
E	-	-	√	11n (20MHz) (2.4GHz) + 11a (5150-5350)
F	-	-	√	11n (20MHz) (2.4GHz) + 11an (40MHz) (5150-5350)
G	-	-	√	11n (20MHz) (2.4GHz) + 11a (5725-5850)
H	√	√	√	11n (20MHz) (2.4GHz) + 11an (20MHz) (5725-5850)

Where **PLC**: Power Line Conducted Emission **RE<1G**: Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz "-": Means no effect.

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	TESTED CHANNEL
H	11n (20MHz) (2.4GHz) + 11an (20MHz) (5725-5850)	CH4: 2437+CH3: 5785

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	TESTED CHANNEL
H	11n (20MHz) (2.4GHz) + 11an (20MHz) (5725-5850)	CH4: 2437+CH3: 5785

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	TESTED CHANNEL
A	11g + 11a (5150-5350)	CH4: 2437+CH4: 5240
B	11g + 11an (40MHz) (5150-5350)	CH4: 2437+CH1: 5190
C	11g + 11a (5725-5850)	CH4: 2437+CH1: 5745
D	11g + 11an (20MHz) (5725-5850)	CH4: 2437+CH3: 5785
E	11n (20MHz) (2.4GHz) + 11a (5150-5350)	CH4: 2437+CH4: 5240
F	11n (20MHz) (2.4GHz) + 11an (40MHz) (5150-5350)	CH4: 2437+CH1: 5190
G	11n (20MHz) (2.4GHz) + 11a (5725-5850)	CH4: 2437+CH1: 5745
H	11n (20MHz) (2.4GHz) + 11an (20MHz) (5725-5850)	CH4: 2437+CH3: 5785



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 (Section 15.247)

FCC Part 15, Subpart E (Section 15.407)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	NOTEBOOK COMPUTER	DELL	PP05L	9954115984	E2K24CLNS

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m RJ45 cable
2	10m RJ45 cable

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 1 ~ 2 acted as communication partners to transfer data.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jul. 27, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Aug. 05, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Jul. 30, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 16, 2008
Preamplifier Agilent	8449B	3008A01910	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10638	Dec. 20, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274039/223650	Nov. 07, 2008
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 09, 2008
Software	ADT_Radiated_V7.6	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA
Turn Table EMCO	2087-2.03	NA	NA
Antenna Tower & Turn Table Controller EMCO	2090	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Apr. 23, 2008

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 9.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The IC Site Registration No. is IC3789B-9.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

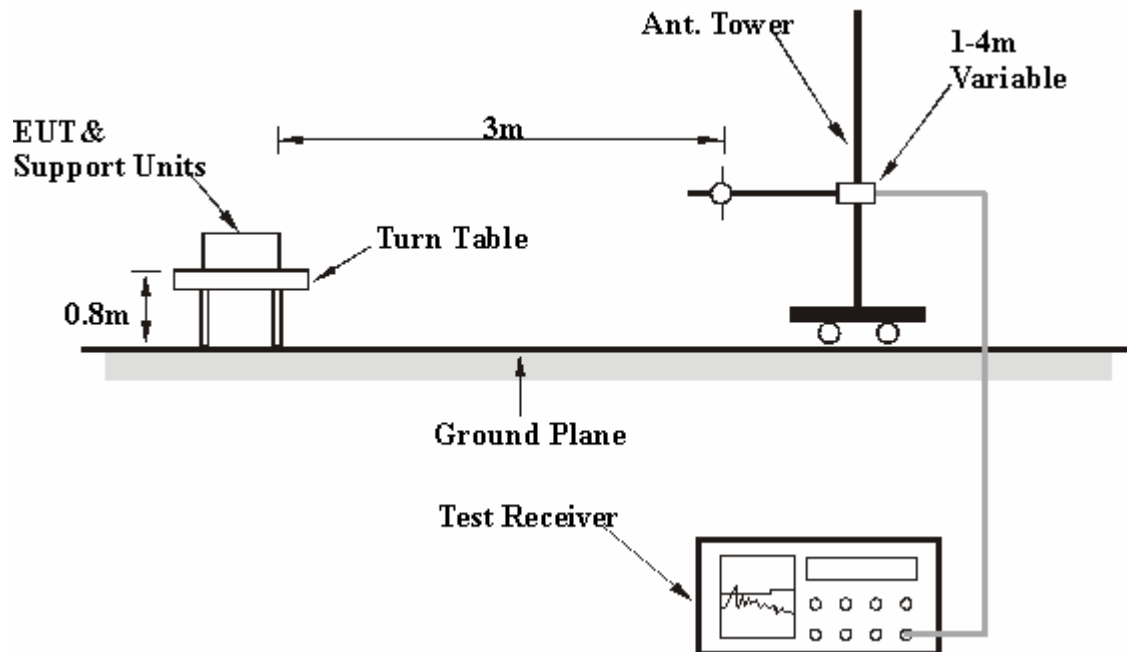
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on a testing table.
- b. Prepared notebook computer and placed it outside of testing area to act as communication partner for EUT.
- c. The EUT ran a test program (provided by manufacturer) to enable all functions under transmission condition continuously at specific channel frequency.
- d. The necessary accessories enable the EUT in full functions.

4.1.7 TEST RESULTS

ABOVE 1GHz DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	2437MHz & 5240MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	TEST MODE	A
TESTED BY	Lori Chiu		

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	103.59 PK			1.00 H	129	71.25	32.34
2	*2437.00	92.76 AV			1.00 H	129	60.42	32.34
3	4874.00	53.67 PK	74.00	-20.33	1.00 H	133	15.55	38.12
4	4874.00	39.66 AV	54.00	-14.34	1.00 H	133	1.54	38.12
5	*5240.00	97.66 PK			1.21 H	315	58.95	38.71
6	*5240.00	86.85 AV			1.21 H	315	48.14	38.71
7	5350.00	51.36 PK	74.00	-22.64	1.21 H	315	12.55	38.81
8	5350.00	41.03 AV	54.00	-12.97	1.21 H	315	2.22	38.81
9	10480.00	60.56 PK	68.30	-7.74	1.32 H	59	11.55	49.01

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	109.93 PK			1.14 V	207	77.59	32.34
2	*2437.00	99.74 AV			1.14 V	207	67.40	32.34
3	3248.00	46.99 PK	74.00	-27.01	1.02 V	177	13.53	33.46
4	3248.00	36.04 AV	54.00	-17.96	1.02 V	177	2.58	33.46
5	4874.00	53.25 PK	74.00	-20.75	1.02 V	30	15.13	38.12
6	4874.00	38.98 AV	54.00	-15.02	1.02 V	30	0.86	38.12
7	*5240.00	107.66 PK			1.01 V	210	68.95	38.71
8	*5240.00	97.21 AV			1.01 V	210	58.50	38.71
9	5350.00	51.78 PK	74.00	-22.22	1.01 V	210	12.97	38.81
10	5350.00	41.28 AV	54.00	-12.72	1.01 V	210	2.47	38.81
11	10480.00	61.20 PK	68.30	-7.10	1.26 V	40	12.19	49.01

- 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	2437MHz & 5190MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	B
TESTED BY	Lori Chiu		

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	103.47 PK			1.02 H	23	71.13	32.34
2	*2437.00	92.69 AV			1.02 H	23	60.35	32.34
3	4874.00	53.58 PK	74.00	-20.42	1.02 H	156	15.46	38.12
4	4874.00	39.57 AV	54.00	-14.43	1.02 H	156	1.45	38.12
5	5150.00	54.39 PK	74.00	-19.61	1.16 H	241	15.80	38.59
6	5150.00	41.55 AV	54.00	-12.45	1.16 H	241	2.96	38.59
7	*5190.00	96.02 PK			1.16 H	241	57.37	38.65
8	*5190.00	85.90 AV			1.16 H	241	47.25	38.65
9	10380.00	59.76 PK	68.30	-8.54	1.00 H	213	11.02	48.74

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	109.67 PK			1.10 V	62	77.33	32.34
2	*2437.00	99.72 AV			1.10 V	62	67.38	32.34
3	3248.00	46.83 PK	74.00	-27.17	1.00 V	326	13.37	33.46
4	3248.00	36.08 AV	54.00	-17.92	1.00 V	326	2.62	33.46
5	4874.00	53.20 PK	74.00	-20.80	1.05 V	280	15.08	38.12
6	4874.00	38.80 AV	54.00	-15.20	1.05 V	280	0.68	38.12
7	5150.00	67.76 PK	74.00	-6.24	1.04 V	162	29.17	38.59
8	5150.00	51.64 AV	54.00	-2.36	1.04 V	162	13.05	38.59
9	*5190.00	106.76 PK			1.04 V	162	68.11	38.65
10	*5190.00	96.71 AV			1.04 V	162	58.06	38.65
11	10380.00	60.27 PK	68.30	-7.96	1.04 V	116	11.53	48.74

- 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	2437MHz & 5745MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	C
TESTED BY	Lori Chiu		

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	103.62 PK			1.11 H	190	71.28	32.34
2	*2437.00	92.80 AV			1.11 H	190	60.46	32.34
3	4874.00	53.48 PK	74.00	-20.52	1.01 H	162	15.36	38.12
4	4874.00	39.56 AV	54.00	-14.44	1.01 H	162	1.44	38.12
5	5725.00	71.54 PK	78.76	-7.22	1.20 H	348	31.93	39.61
6	5725.00	53.78 AV	67.89	-14.11	1.20 H	348	14.17	39.61
7	*5745.00	98.76 PK			1.20 H	348	59.10	39.66
8	*5745.00	87.89 AV			1.20 H	348	48.23	39.66
9	11490.00	55.58 PK	74.00	-18.42	1.27 H	155	5.84	49.74
10	11490.00	42.97 AV	54.00	-11.03	1.27 H	155	-6.77	49.74

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	109.96 PK			1.00 V	123	77.62	32.34
2	*2437.00	99.81 AV			1.00 V	123	67.47	32.34
3	3248.00	46.87 PK	74.00	-27.13	1.17 V	357	13.41	33.46
4	3248.00	36.22 AV	54.00	-17.78	1.17 V	357	2.76	33.46
5	4874.00	53.36 PK	74.00	-20.64	1.36 V	167	15.24	38.12
6	4874.00	39.11 AV	54.00	-14.89	1.36 V	167	0.99	38.12
7	5725.00	76.34 PK	89.45	-13.11	1.04 V	165	36.73	39.61
8	5725.00	62.23 AV	77.90	-15.67	1.04 V	165	22.62	39.61
9	*5745.00	109.45 PK			1.04 V	165	69.79	39.66
10	*5745.00	97.90 AV			1.04 V	165	58.24	39.66
11	11490.00	57.90 PK	74.00	-16.10	1.04 V	120	8.16	49.74
12	11490.00	45.53 AV	54.00	-8.47	1.04 V	120	-4.21	49.74

- 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	2437MHz & 5785MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	D
TESTED BY	Lori Chiu		

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	103.60 PK			1.11 H	156	71.26	32.34
2	*2437.00	92.84 AV			1.11 H	156	60.50	32.34
3	4874.00	53.02 PK	74.00	-20.98	1.10 H	235	14.90	38.12
4	4874.00	38.70 AV	54.00	-15.30	1.10 H	235	0.58	38.12
5	*5785.00	99.89 PK			1.07 H	15	60.14	39.75
6	*5785.00	89.67 AV			1.07 H	15	49.92	39.75
7	11570.00	55.25 PK	74.00	-18.75	1.00 H	247	5.56	49.69
8	11570.00	42.62 AV	54.00	-11.38	1.00 H	247	-7.07	49.69

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2437.00	109.87 PK			1.35 V	258	77.53	32.34
2	*2437.00	99.79 AV			1.35 V	258	67.45	32.34
3	3248.00	46.75 PK	74.00	-27.25	1.15 V	215	13.29	33.46
4	3248.00	36.19 AV	54.00	-17.81	1.15 V	215	2.73	33.46
5	4874.00	53.40 PK	74.00	-20.60	1.00 V	67	15.28	38.12
6	4874.00	39.25 AV	54.00	-14.75	1.00 V	67	1.13	38.12
7	*5785.00	111.76 PK			1.30 V	211	72.01	39.75
8	*5785.00	100.90 AV			1.30 V	211	61.15	39.75
9	11570.00	56.88 PK	74.00	-17.12	1.21 V	166	7.19	49.69
10	11570.00	43.69 AV	54.00	-10.31	1.21 V	166	-6.00	49.69

- 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	2437MHz & 5240MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	E
TESTED BY	Lori Chiu		

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	103.84 PK			1.02 H	111	71.50	32.34
2	*2437.00	93.80 AV			1.02 H	111	61.46	32.34
3	3248.00	45.60 PK	74.00	-28.40	1.07 H	357	12.14	33.46
4	3248.00	41.52 AV	54.00	-12.48	1.07 H	357	8.06	33.46
5	4874.00	46.69 PK	74.00	-27.31	1.00 H	155	8.57	38.12
6	4874.00	34.57 AV	54.00	-19.43	1.00 H	155	-3.55	38.12
7	*5240.00	97.84 PK			1.00 H	14	59.13	38.71
8	*5240.00	86.91 AV			1.00 H	14	48.20	38.71
9	5350.00	51.24 PK	74.00	-22.76	1.00 H	14	12.43	38.81
10	5350.00	41.00 AV	54.00	-13.00	1.00 H	14	2.19	38.81
11	10480.00	61.22 PK	68.30	-7.08	1.02 H	69	12.21	49.01

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	114.76 PK			1.01 V	264	82.42	32.34
2	*2437.00	104.68 AV			1.01 V	264	72.34	32.34
3	3248.00	45.72 PK	74.00	-28.28	1.19 V	158	12.26	33.46
4	3248.00	41.86 AV	54.00	-12.14	1.19 V	158	8.40	33.46
5	4874.00	47.87 PK	74.00	-26.13	1.00 V	72	9.75	38.12
6	4874.00	34.90 AV	54.00	-19.10	1.00 V	72	-3.22	38.12
7	*5240.00	107.59 PK			1.13 V	284	68.88	38.71
8	*5240.00	97.16 AV			1.13 V	284	58.45	38.71
9	5350.00	51.69 PK	74.00	-22.31	1.13 V	284	12.88	38.81
10	5350.00	41.11 AV	54.00	-12.89	1.13 V	284	2.30	38.81
11	10480.00	61.37 PK	68.30	-6.93	1.17 V	37	12.36	49.01

- 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	2437MHz & 5190MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	F
TESTED BY	Lori Chiu		

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	103.79 PK			1.11 H	103	71.45	32.34
2	*2437.00	93.77 AV			1.11 H	103	61.43	32.34
3	3248.00	45.28 PK	74.00	-28.72	1.07 H	199	11.82	33.46
4	3248.00	41.63 AV	54.00	-12.37	1.07 H	199	8.17	33.46
5	4874.00	47.58 PK	74.00	-26.42	1.02 H	330	9.46	38.12
6	4874.00	34.67 AV	54.00	-19.33	1.02 H	330	-3.45	38.12
7	5150.00	54.58 PK	74.00	-19.42	1.00 H	67	15.99	38.59
8	5150.00	41.99 AV	54.00	-12.01	1.00 H	67	3.40	38.59
9	*5190.00	96.24 PK			1.00 H	67	57.59	38.65
10	*5190.00	85.93 AV			1.00 H	67	47.28	38.65
11	10380.00	59.77 PK	68.30	-8.53	1.10 H	256	11.03	48.74

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	114.82 PK			1.04 V	56	82.48	32.34
2	*2437.00	104.72 AV			1.04 V	56	72.38	32.34
3	3248.00	45.69 PK	74.00	-28.31	1.20 V	248	12.23	33.46
4	3248.00	41.77 AV	54.00	-12.23	1.20 V	248	8.31	33.46
5	4874.00	47.64 PK	74.00	-26.36	1.20 V	321	9.52	38.12
6	4874.00	34.87 AV	54.00	-19.13	1.20 V	321	-3.25	38.12
7	5150.00	67.68 PK	74.00	-6.32	1.00 V	166	29.09	38.59
8	5150.00	51.59 AV	54.00	-2.41	1.00 V	166	13.00	38.59
9	*5190.00	106.84 PK			1.00 V	166	68.19	38.65
10	*5190.00	96.80 AV			1.00 V	166	58.15	38.65
11	10380.00	60.36 PK	68.30	-7.94	1.06 V	137	11.62	48.74

- 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	2437MHz & 5745MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	G
TESTED BY	Lori Chiu		

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	103.75 PK			1.15 H	327	71.41	32.34
2	*2437.00	93.64 AV			1.15 H	327	61.30	32.34
3	3248.00	45.50 PK	74.00	-28.50	1.00 H	17	12.04	33.46
4	3248.00	41.08 AV	54.00	-12.92	1.00 H	17	7.62	33.46
5	4874.00	47.11 PK	74.00	-26.89	1.01 H	229	8.99	38.12
6	4874.00	34.27 AV	54.00	-19.73	1.01 H	229	-3.85	38.12
7	5725.00	71.32 PK	78.82	-7.50	1.10 H	219	31.71	39.61
8	5725.00	53.64 AV	67.91	-14.27	1.10 H	219	14.03	39.61
9	*5745.00	98.82 PK			1.10 H	219	59.16	39.66
10	*5745.00	87.91 AV			1.10 H	219	48.25	39.66
11	11490.00	57.65 PK	74.00	-16.35	1.00 H	170	7.91	49.74
12	11490.00	45.58 AV	54.00	-8.42	1.00 H	170	-4.16	49.74

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	114.79 PK			1.02 V	241	82.45	32.34
2	*2437.00	104.67 AV			1.02 V	241	72.33	32.34
3	3248.00	45.75 PK	74.00	-28.25	1.00 V	340	12.29	33.46
4	3248.00	41.70 AV	54.00	-12.30	1.00 V	340	8.24	33.46
5	4874.00	47.58 PK	74.00	-26.42	1.24 V	271	9.46	38.12
6	4874.00	34.79 AV	54.00	-19.21	1.24 V	271	-3.33	38.12
7	5725.00	76.39 PK	89.38	-12.99	1.08 V	267	36.78	39.61
8	5725.00	62.28 AV	77.82	-15.54	1.08 V	267	22.67	39.61
9	*5745.00	109.38 PK			1.08 V	267	69.72	39.66
10	*5745.00	97.82 AV			1.08 V	267	58.16	39.66
11	11490.00	57.88 PK	74.00	-16.12	1.02 V	39	8.14	49.74
12	11490.00	45.67 AV	54.00	-8.33	1.02 V	39	-4.07	49.74

- 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	2437MHz & 5785MHz	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa	TEST MODE	H
TESTED BY	Lori Chiu		

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	103.79 PK			1.25 H	167	71.44	32.34
2	*2437.00	93.54 AV			1.25 H	167	61.20	32.34
3	3248.00	44.35 PK	74.00	-29.65	1.00 H	152	10.89	33.46
4	3248.00	40.39 AV	54.00	-13.61	1.00 H	152	6.93	33.46
5	4874.00	47.53 PK	74.00	-26.47	1.00 H	269	9.41	38.12
6	4874.00	34.29 AV	54.00	-19.71	1.00 H	269	-3.83	38.12
7	*5785.00	99.92 PK			1.06 H	10	60.17	39.75
8	*5785.00	89.75 AV			1.06 H	10	50.00	39.75
9	11570.00	55.72 PK	74.00	-18.28	1.00 H	69	6.03	49.69
10	11570.00	42.63 AV	54.00	-11.37	1.00 H	69	-7.06	49.69

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	114.60 PK			1.13 V	197	82.26	32.34
2	*2437.00	104.47 AV			1.13 V	197	72.13	32.34
3	3248.00	45.88 PK	74.00	-28.12	1.02 V	228	12.42	33.46
4	3248.00	41.67 AV	54.00	-12.33	1.02 V	228	8.21	33.46
5	4874.00	47.67 PK	74.00	-26.33	1.00 V	35	9.55	38.12
6	4874.00	34.62 AV	54.00	-19.38	1.00 V	35	-3.50	38.12
7	*5785.00	111.79 PK			1.25 V	167	72.04	39.75
8	*5785.00	100.92 AV			1.25 V	167	61.17	39.75
9	11570.00	56.49 PK	74.00	-17.51	1.00 V	232	6.80	49.69
10	11570.00	43.50 AV	54.00	-10.50	1.00 V	232	-6.19	49.69

- 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:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	2437MHz & 5785MHz	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	27deg. C, 68%RH, 991hPa	TEST MODE	H
TESTED BY	Lori Chiu		

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	183.50	35.65 QP	43.50	-7.85	1.50 H	250	23.92	11.73
2	250.00	43.73 QP	46.00	-2.27	1.08 H	291	31.18	12.55
3	500.42	40.49 QP	46.00	-5.51	1.75 H	139	21.73	18.76
4	599.58	39.66 QP	46.00	-6.34	1.25 H	250	18.57	21.09
5	624.85	38.71 QP	46.00	-7.29	1.25 H	73	17.39	21.32
6	799.84	38.79 QP	46.00	-7.21	1.00 H	259	14.43	24.36
7	875.67	39.90 QP	46.00	-6.10	1.75 H	223	14.81	25.09

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	181.55	39.18 QP	43.50	-4.32	1.00 V	334	27.28	11.90
2	250.00	42.56 QP	46.00	-3.44	1.00 V	225	30.01	12.55
3	500.42	38.56 QP	46.00	-7.44	1.25 V	13	19.79	18.76
4	624.85	40.05 QP	46.00	-5.95	1.50 V	202	18.73	21.32
5	751.23	38.13 QP	46.00	-7.87	1.25 V	199	14.91	23.22
6	799.84	38.34 QP	46.00	-7.66	1.75 V	148	13.98	24.36
7	875.67	40.89 QP	46.00	-5.11	1.25 V	61	15.80	25.09
8	1000.10	46.43 QP	54.00	-7.57	1.25 V	16	20.52	25.91

- 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.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Sep. 21, 2008
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2008
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 08, 2008
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 16, 2008
Software ADT	ADT_Cond_V3	NA	NA

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

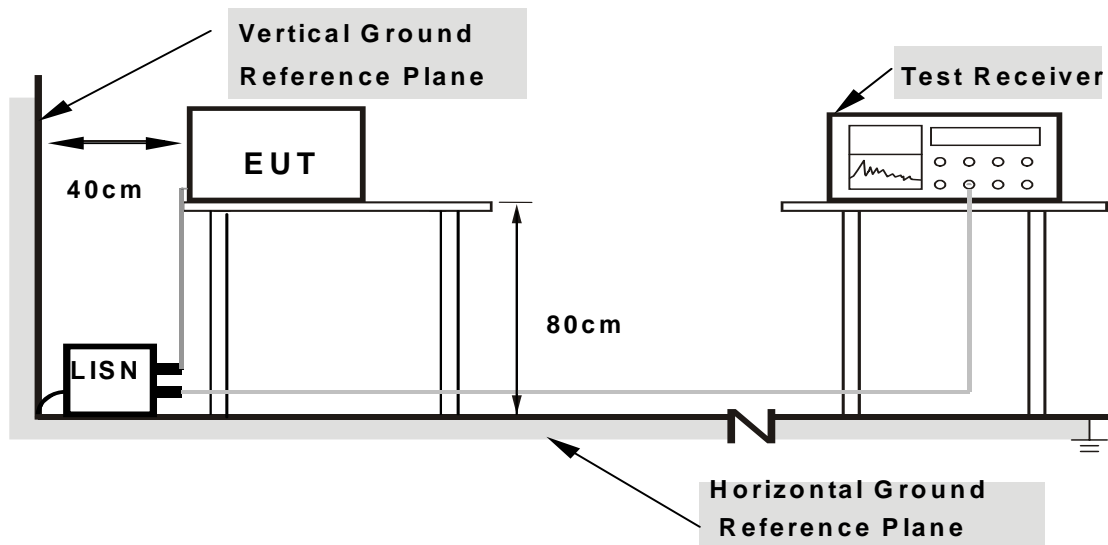
4.2.3 TEST PROCEDURES

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

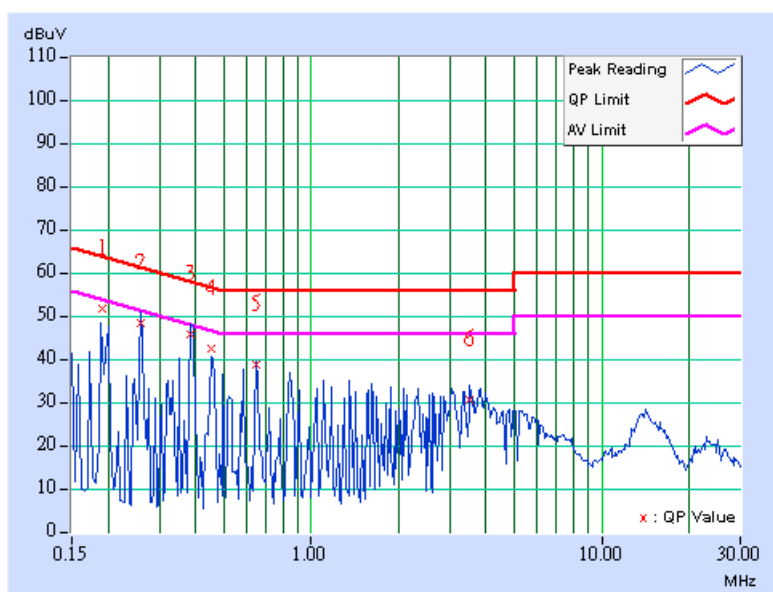
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11g OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	2437MHz & 5785MHz	PHASE	Line 1
INPUT POWER (SYSTEM)	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TEST MODE	H
TESTED BY	Kevin Liang		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.191	0.10	51.57	-	51.67	-	63.97	53.97	-12.30	-
2	0.259	0.10	48.21	-	48.31	-	61.48	51.48	-13.17	-
3	0.386	0.10	45.57	-	45.67	-	58.16	48.16	-12.49	-
4	0.452	0.10	42.26	-	42.36	-	56.85	46.85	-14.49	-
5	0.649	0.10	38.64	-	38.74	-	56.00	46.00	-17.26	-
6	3.515	0.27	30.57	-	30.84	-	56.00	46.00	-25.16	-

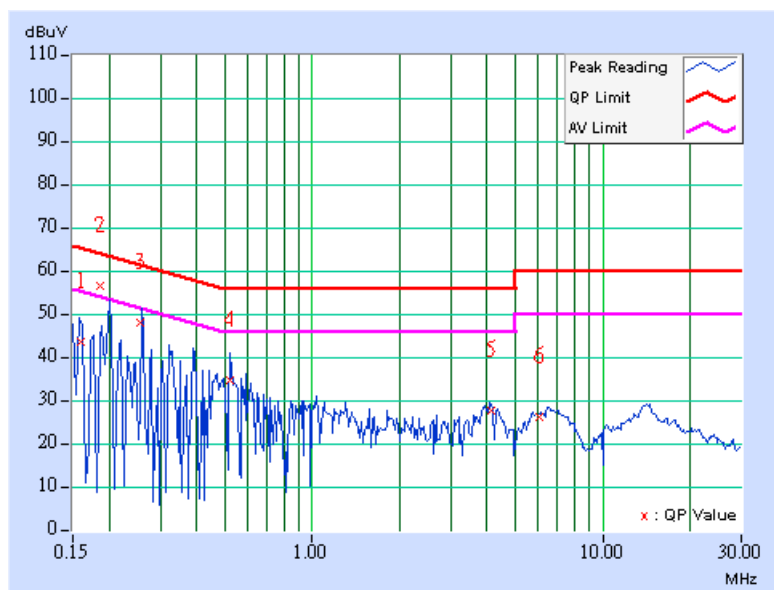
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	2437MHz & 5785MHz	PHASE	Line 1
INPUT POWER (SYSTEM)	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	TEST MODE	H
TESTED BY	Kevin Liang		

No	Freq. [MHz]	Corr. Factor [dB]	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.159	0.10	43.24	-	43.34	-	65.52	55.52	-22.18	-
2	0.186	0.10	56.38	47.70	56.48	47.80	64.22	54.22	-7.74	-6.42
3	0.255	0.10	47.85	-	47.95	-	61.61	51.61	-13.66	-
4	0.522	0.12	34.57	-	34.69	-	56.00	46.00	-21.31	-
5	4.146	0.28	27.27	-	27.55	-	56.00	46.00	-28.45	-
6	6.024	0.33	25.80	-	26.13	-	60.00	50.00	-33.87	-

- 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.





5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation 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

Web Site: www.adt.com.tw

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



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

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