

FCC TEST REPORT

REPORT NO.: RF930707L05B

MODEL NO.: WLG-2008

OEM MODEL NO.: GW-AP54Mini

RECEIVED: NA

TESTED: Jul. 01 ~ Jul. 20, 2004

ISSUED: Jul. 21, 2005

APPLICANT: CAMEO COMMUNICATIONS, INC.

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ISSUED BY: Advance Data Technology Corporation

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0528
ILAC MRA



No. 2177-01

TABLE OF CONTENTS

1.	CERTIFICATION	4
2.	SUMMARY OF TEST RESULTS	5
2.1	MEASUREMENT UNCERTAINTY	5
3.	GENERAL INFORMATION	6
3.1	GENERAL DESCRIPTION OF EUT	6
3.2	DESCRIPTION OF TEST MODES	7
3.2.1	CONFIGURATION OF SYSTEM UNDER TEST	7
3.2.2	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	8
3.2.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	10
3.2.4	DESCRIPTION OF SUPPORT UNITS	10
4.	TEST TYPES AND RESULTS	11
4.1	CONDUCTED EMISSION MEASUREMENT	11
4.1.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	11
4.1.2	TEST INSTRUMENTS	11
4.1.3	TEST PROCEDURES	12
4.1.4	DEVIATION FROM TEST STANDARD	12
4.1.5	TEST SETUP	13
4.1.6	EUT OPERATING CONDITIONS	13
4.1.7	TEST RESULTS	14
4.2	RADIATED EMISSION MEASUREMENT	20
4.2.1	LIMITS OF RADIATED EMISSION MEASUREMENT	20
4.2.2	TEST INSTRUMENTS	21
4.2.3	TEST PROCEDURES	22
4.2.4	DEVIATION FROM TEST STANDARD	23
4.2.5	TEST SETUP	23
4.2.6	EUT OPERATING CONDITIONS	23
4.2.7	TEST RESULTS	24
4.3	6dB BANDWIDTH MEASUREMENT	35
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	35
4.3.2	TEST INSTRUMENTS	35
4.3.3	TEST PROCEDURE	36
4.3.4	DEVIATION FROM TEST STANDARD	36
4.3.5	TEST SETUP	36
4.3.6	EUT OPERATING CONDITIONS	36
4.3.7	TEST RESULTS	37
4.4	MAXIMUM PEAK OUTPUT POWER	43
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	43
4.4.2	INSTRUMENTS	43
4.4.3	TEST PROCEDURES	44
4.4.4	DEVIATION FROM TEST STANDARD	44
4.4.5	TEST SETUP	44
4.4.6	EUT OPERATING CONDITIONS	44
4.4.7	TEST RESULTS	45
4.5	POWER SPECTRAL DENSITY MEASUREMENT	46
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	46
4.5.2	TEST INSTRUMENTS	46



4.5.3 TEST PROCEDURE	47
4.5.4 DEVIATION FROM TEST STANDARD	47
4.5.5 TEST SETUP	47
4.5.6 EUT OPERATING CONDITION	47
4.5.7 TEST RESULTS	48
4.6 BAND EDGES MEASUREMENT	54
4.6.1 LIMITS OF BAND EDGES MEASUREMENT	54
4.6.2 TEST INSTRUMENTS	54
4.6.3 TEST PROCEDURE	54
4.6.4 DEVIATION FROM TEST STANDARD	54
4.6.5 EUT OPERATING CONDITION	54
4.6.6 TEST RESULTS	55
4.7 ANTENNA REQUIREMENT	63
4.7.1 STANDARD APPLICABLE	63
4.7.2 ANTENNA CONNECTED CONSTRUCTION	63
5. PHOTOGRAPHS OF THE TEST CONFIGURATION	64
6. INFORMATION ON THE TESTING LABORATORIES	66



1. CERTIFICATION

PRODUCT: Wireless LAN Pocket AP
MODEL: WLG-2008
OEM MODEL NO.: GW-AP54Mini
BRAND: Cameo
OEM BRAND: Planex
APPLICANT: CAMEO COMMUNICATIONS, INC.
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: FCC Part 15, Subpart C (Section 15.247),
ANSI C63.4-2001

The above equipment (model no.: WLG-2008) is identical to model no. WL AP 2454 NM1, which has been tested by **Advance Data Technology Corporation** from Jul. 01 ~ Jul. 20, 2004, 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:** Jul. 21, 2005
Andrea Hsia

TECHNICAL
ACCEPTANCE : Gary Chang , **DATE:** Jul. 21, 2005
Responsible for RF Gary Chang

APPROVED BY : Cody Chang , **DATE:** Jul. 21, 2005
Cody Chang / Deputy 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 -4.25dB at 0.302MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is -3.11dB at 60.82MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

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:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz ~ 30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~ 1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless LAN Pocket AP
MODEL NO.	WLG-2008
OEM MODEL NO.	GW-AP54Mini
POWER SUPPLY	5Vdc from AC adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
RADIO TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	63.533 mW
ANTENNA TYPE	Chip & Inverted F antenna with 0dBi
DATA CABLE	NA
I/O PORTS	RJ45
ASSOCIATED DEVICES	NA

NOTE:

1. This is a duplicate report of RF930707L05, the difference are changing the Model name, Brand name, Product Name and Applicant.
2. The EUT was powered by following adapter.

Model :	JTA0402D-A
BRAND :	JENTEC
Input :	100~240Vac, 50~60Hz, 0.25A
Output :	5Vdc, 1.2A
Power Line:	1.8m non-shielded cable without core

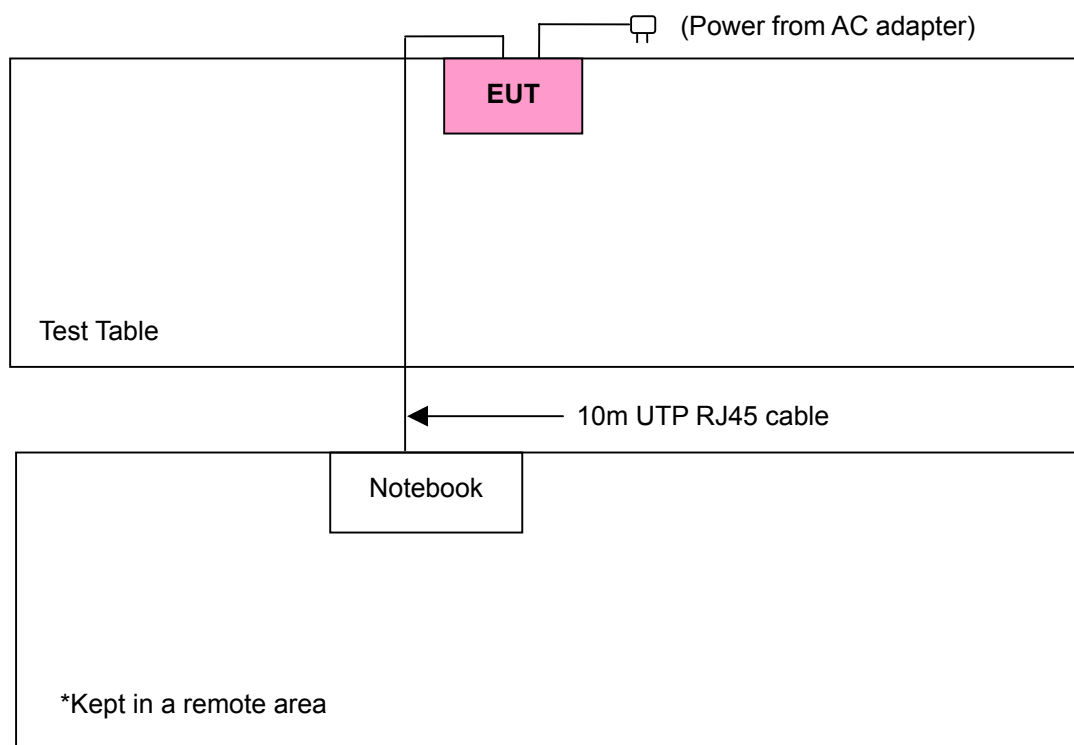
3. The EUT, operates in the 2.4GHz frequency range, lets you connect IEEE 802.11g or IEEE 802.11b devices to the network. With its high-speed data transmissions of up to 54Mbps.
4. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided to this EUT.

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

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	APCM	
1	Note 1	√	Note 2	Note 3	EUT for AP function
2	Note 1	√	Note 2	Note 3	EUT for Router function
3	Note 1	√	Note 2	Note 3	EUT for Client function

Where **PLC**: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

Note 1: No effect on Power Line Conducted Emission above 1GHz.

Note 2: No effect on Radiated Emission above 1GHz.

Note 3: No effect on Conducted RF measurement.

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)
1	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ 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)
1	802.11g	1 to 11	11	OFDM	BPSK	6
2	802.11g	1 to 11	11	OFDM	BPSK	6
3	802.11g	1 to 11	11	OFDM	BPSK	6

**RADIATED EMISSION TEST (ABOVE 1 GHz):**

- ☒ 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)
1	802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
1	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

BANDEDGE MEASUREMENT:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 11	DSSS	CCK	11
802.11g	1 to 11	1, 11	OFDM	BPSK	6

ANTENNA PORT CONDUCTED MEASUREMENT:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	CCK	11
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6

3.2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless LAN Pocket AP. 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: 2001

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.

3.2.4 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	ASUS	M2400	2ANP028403 M2417PDV-846XEC	FCC DoC Approved

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

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

NOTE:

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

4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Dec. 11, 2004
RF signal cable Woken	5D-FB	Cable-HyC02-01	Mar. 07, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Mar. 10, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Mar. 04, 2005
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.



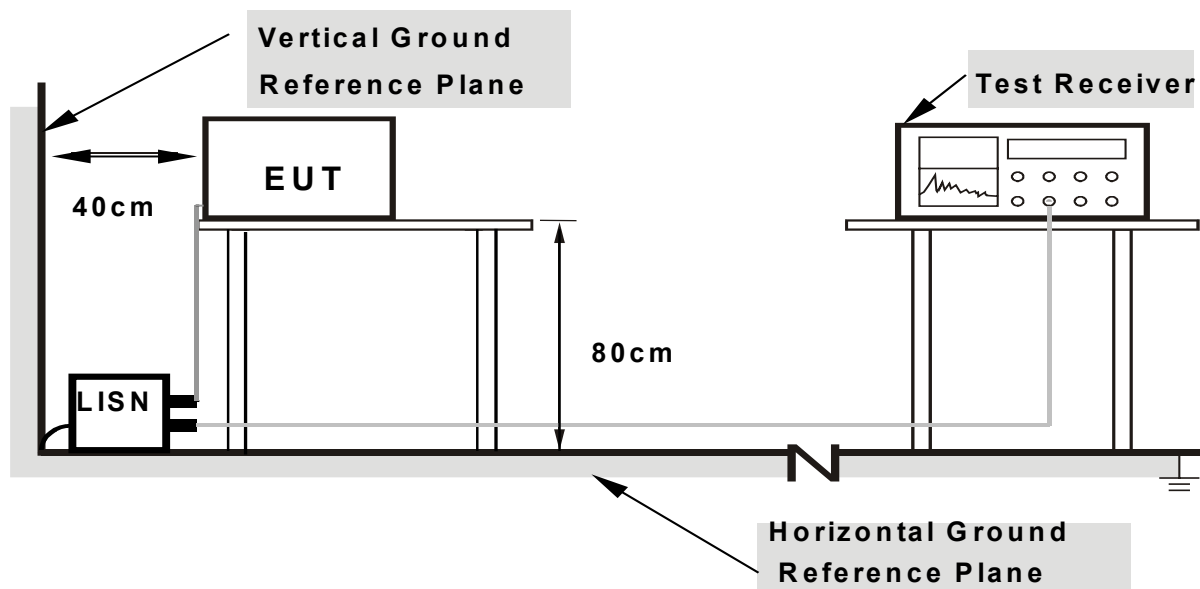
4.1.3 TEST PROCEDURES

- 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.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 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 related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

- a. Connected the EUT to a notebook system via RJ45 cable and placed on a testing table.
- b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

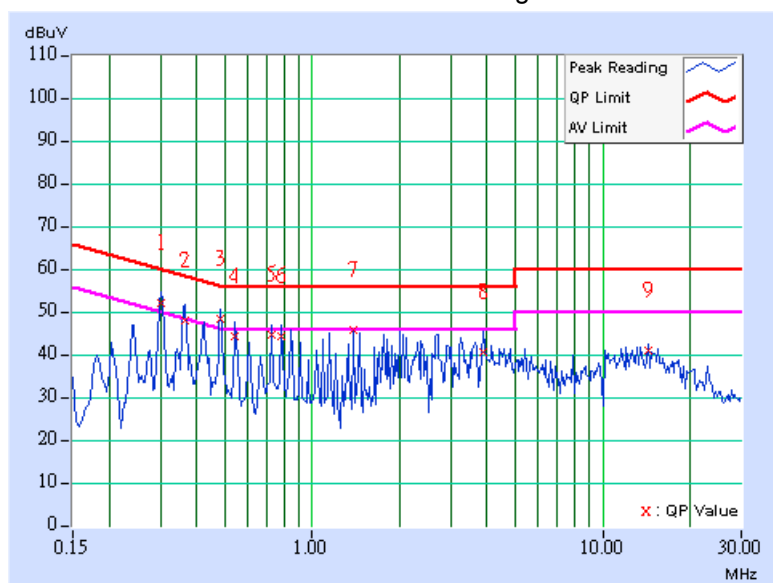
CONDUCTED WORST-CASE DATA

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 1
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	51.57	45.54	51.68	45.65	60.18	50.18	-8.50	-4.53
2	0.363	0.11	47.65	-	47.76	-	58.65	48.65	-10.89	-
3	0.483	0.13	47.79	41.29	47.92	41.42	56.28	46.28	-8.36	-4.86
4	0.545	0.15	43.83	-	43.98	-	56.00	46.00	-12.02	-
5	0.726	0.19	44.17	-	44.36	-	56.00	46.00	-11.64	-
6	0.787	0.20	43.87	-	44.07	-	56.00	46.00	-11.93	-
7	1.392	0.25	45.38	-	45.63	-	56.00	46.00	-10.37	-
8	3.874	0.31	40.02	-	40.33	-	56.00	46.00	-15.67	-
9	14.319	0.68	40.46	-	41.14	-	60.00	50.00	-18.86	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

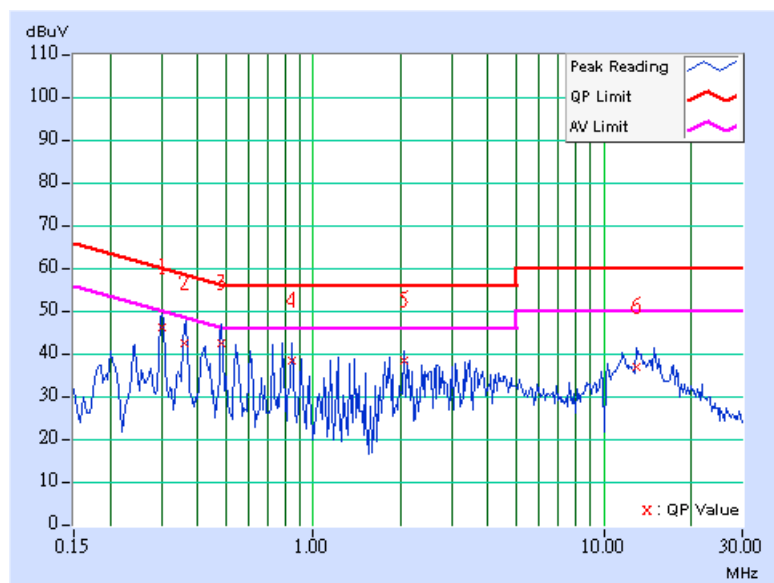


EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 2
CHANNEL	Channel 1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	45.89	-	46.00	-	60.18	50.18	-14.18	-
2	0.362	0.11	42.18	-	42.29	-	58.68	48.68	-16.39	-
3	0.483	0.13	42.18	-	42.31	-	56.28	46.28	-13.97	-
4	0.847	0.20	37.92	-	38.12	-	56.00	46.00	-17.88	-
5	2.056	0.25	38.09	-	38.34	-	56.00	46.00	-17.66	-
6	12.947	0.53	36.57	-	37.10	-	60.00	50.00	-22.90	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- REMARKS:**
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 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.

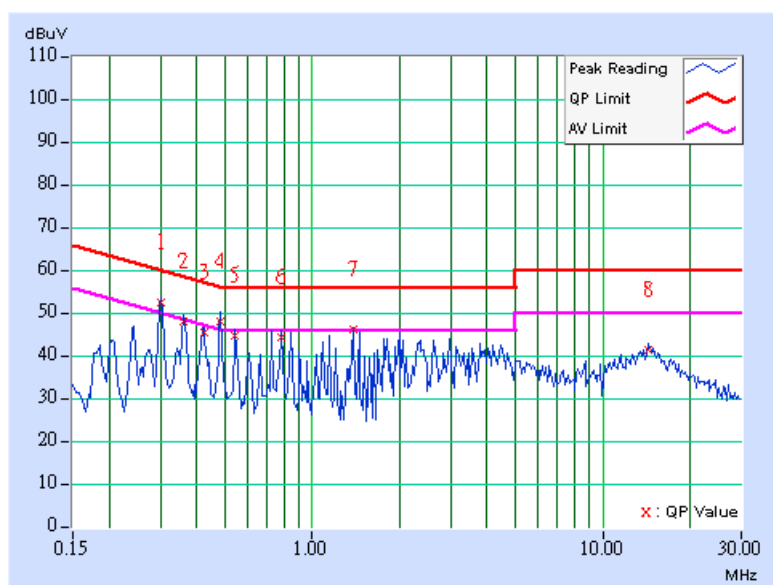


EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 1
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	51.83	45.77	51.94	45.88	60.18	50.18	-8.24	-4.30
2	0.362	0.11	47.47	-	47.58	-	58.68	48.68	-11.10	-
3	0.423	0.12	44.96	-	45.08	-	57.38	47.38	-12.30	-
4	0.485	0.13	47.59	41.22	47.72	41.35	56.26	46.26	-8.54	-4.91
5	0.545	0.15	44.03	-	44.18	-	56.00	46.00	-11.82	-
6	0.787	0.20	43.95	-	44.15	-	56.00	46.00	-11.85	-
7	1.391	0.25	45.71	-	45.96	-	56.00	46.00	-10.04	-
8	14.319	0.68	40.97	-	41.65	-	60.00	50.00	-18.35	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

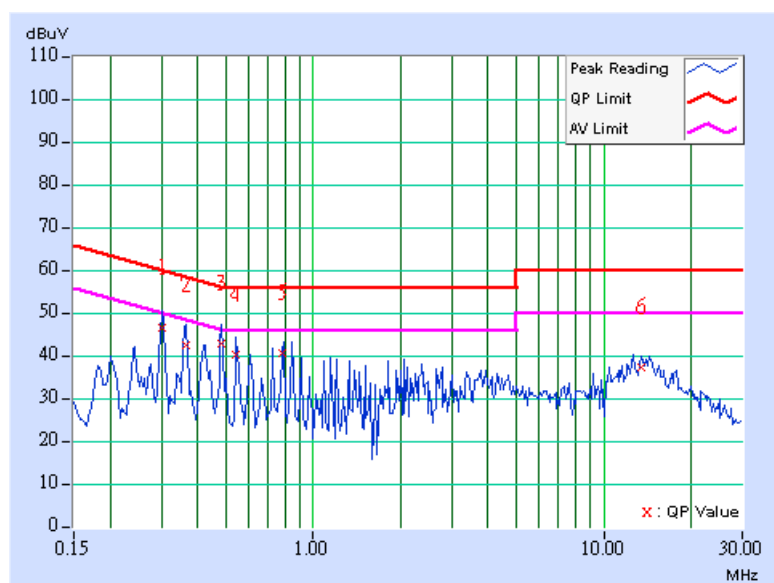


EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 2
CHANNEL	Channel 6	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	45.95	-	46.06	-	60.18	50.18	-14.12	-
2	0.364	0.11	41.87	-	41.98	-	58.65	48.65	-16.67	-
3	0.483	0.13	42.40	-	42.53	-	56.28	46.28	-13.75	-
4	0.545	0.14	39.70	-	39.84	-	56.00	46.00	-16.16	-
5	0.787	0.19	40.13	-	40.32	-	56.00	46.00	-15.68	-
6	13.496	0.54	37.05	-	37.59	-	60.00	50.00	-22.41	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

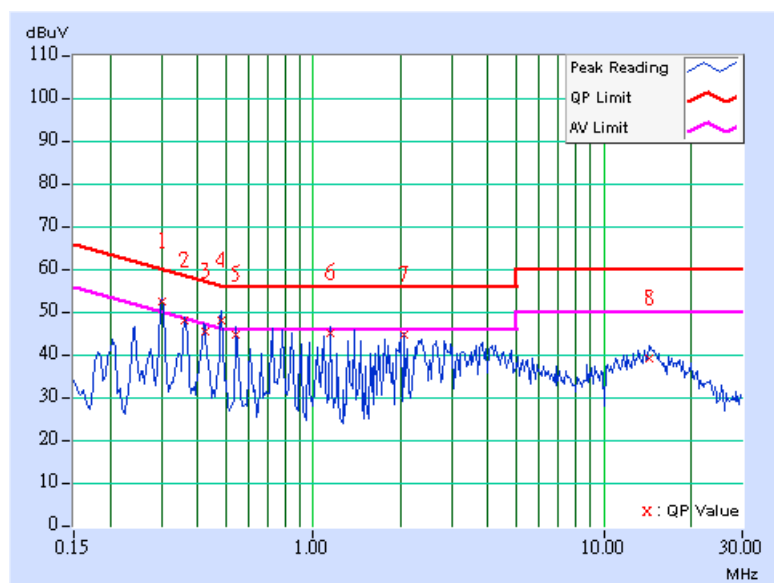


EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 1
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	51.89	45.82	52.00	45.93	60.18	50.18	-8.18	-4.25
2	0.362	0.11	47.47	-	47.58	-	58.68	48.68	-11.10	-
3	0.423	0.12	45.00	-	45.12	-	57.38	47.38	-12.26	-
4	0.485	0.13	47.61	41.29	47.74	41.42	56.26	46.26	-8.52	-4.84
5	0.545	0.15	44.28	-	44.43	-	56.00	46.00	-11.57	-
6	1.148	0.25	44.61	-	44.86	-	56.00	46.00	-11.14	-
7	2.055	0.26	44.30	-	44.56	-	56.00	46.00	-11.44	-
8	14.382	0.68	38.69	-	39.37	-	60.00	50.00	-20.63	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

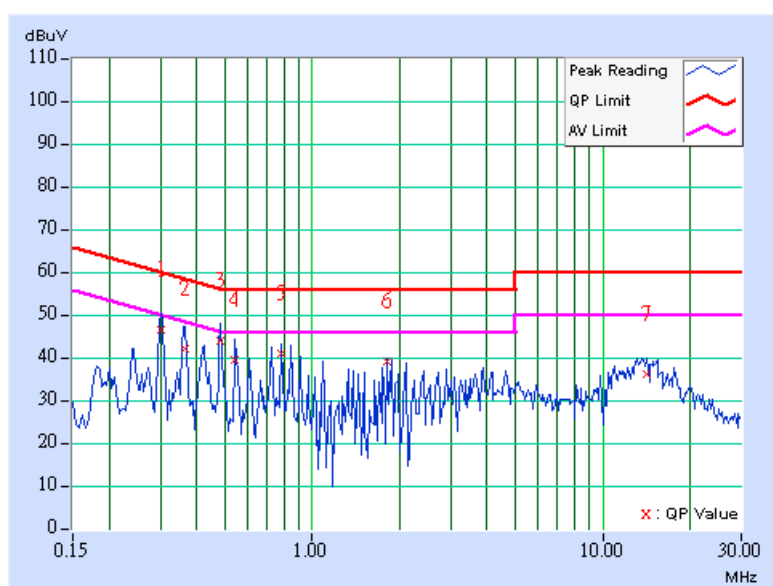


EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	PHASE	Line 2
CHANNEL	Channel 11	6dB BANDWIDTH	9 kHz
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	24deg. C, 75%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	0.302	0.11	46.14	-	46.25	-	60.18	50.18	-13.93	-
2	0.363	0.11	41.83	-	41.94	-	58.65	48.65	-16.71	-
3	0.484	0.13	43.50	-	43.63	-	56.28	46.28	-12.65	-
4	0.545	0.14	39.15	-	39.29	-	56.00	46.00	-16.71	-
5	0.787	0.19	40.48	-	40.67	-	56.00	46.00	-15.33	-
6	1.815	0.25	38.81	-	39.06	-	56.00	46.00	-16.94	-
7	14.254	0.55	35.67	-	36.22	-	60.00	50.00	-23.78	-

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 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.



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Jan. 13, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 15, 2004
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2005
Preamplifier Agilent	8449B	3008A01961	Jan. 22, 2005
Preamplifier Agilent	8447D	2944A10629	Jan. 14, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Mar. 04, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 1.
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 IC4924-2.

4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter 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 method or average method as specified and then reported in data sheet.

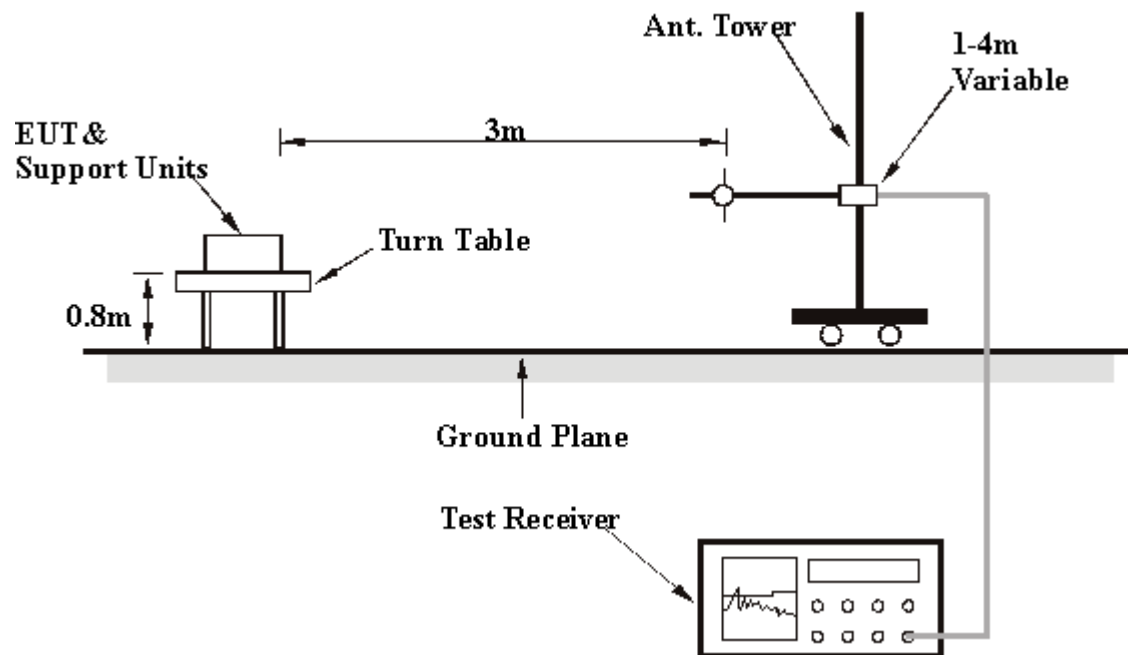
NOTE:

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 and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

RADIATED WORST-CASE DATA: BELOW 1GHz (EUT for AP function)

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	23deg. C, 60%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	1	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	61.10	27.07 QP	40.00	-12.93	1.25 H	139	13.48	13.59
2	160.24	33.00 QP	43.50	-10.50	1.50 H	118	18.14	14.87
3	232.16	28.80 QP	46.00	-17.20	1.25 H	226	16.21	12.59
4	321.58	30.54 QP	46.00	-15.46	1.00 H	241	15.55	15.00
5	480.98	35.99 QP	46.00	-10.01	2.00 H	250	17.51	18.48
6	640.38	34.48 QP	46.00	-11.52	1.25 H	223	12.93	21.55
7	801.72	37.82 QP	46.00	-8.18	1.00 H	226	13.98	23.83

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	47.49	36.35 QP	40.00	-3.65	1.00 V	244	21.34	15.00
2	60.82	36.89 QP	40.00	-3.11	1.06 V	82	23.27	13.62
3	101.92	32.82 QP	43.50	-10.68	1.25 V	253	21.64	11.18
4	111.64	32.13 QP	43.50	-11.37	1.00 V	22	19.95	12.17
5	160.24	41.42 QP	43.50	-2.08	1.00 V	127	26.55	14.87
6	234.11	32.99 QP	46.00	-13.01	1.00 V	88	20.28	12.71
7	319.64	30.81 QP	46.00	-15.19	1.25 V	100	15.86	14.95
8	480.98	36.99 QP	46.00	-9.01	1.00 V	133	18.51	18.48
9	640.38	34.59 QP	46.00	-11.41	1.00 V	283	13.04	21.55
10	801.72	37.65 QP	46.00	-8.35	1.00 V	154	13.81	23.83

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

RADIATED WORST-CASE DATA: BELOW 1GHz (EUT for Router function)

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	51.38	21.92 QP	40.00	-18.08	1.50 H	271	7.36	14.56
2	160.24	26.88 QP	43.50	-16.62	1.75 H	238	12.01	14.87
3	249.66	26.55 QP	46.00	-19.45	1.25 H	13	13.34	13.22
4	319.64	33.24 QP	46.00	-12.76	1.00 H	265	18.29	14.95
5	374.07	28.86 QP	46.00	-17.14	1.00 H	238	12.68	16.18
6	399.34	28.01 QP	46.00	-17.99	1.75 H	265	11.27	16.74
7	479.04	37.70 QP	46.00	-8.30	2.00 H	271	19.25	18.45
8	500.42	38.51 QP	46.00	-7.49	1.75 H	253	19.77	18.74
9	519.86	30.57 QP	46.00	-15.43	1.50 H	259	11.46	19.11
10	599.56	33.90 QP	46.00	-12.10	1.50 H	37	12.90	21.00
11	640.38	31.98 QP	46.00	-14.02	1.25 H	307	10.43	21.55
12	700.64	31.41 QP	46.00	-14.59	1.00 H	265	9.10	22.32
13	768.68	29.81 QP	46.00	-16.19	1.50 H	319	6.17	23.64
14	799.78	32.95 QP	46.00	-13.05	1.00 H	1	9.14	23.82
15	961.12	31.53 QP	54.00	-22.47	1.50 H	262	5.85	25.68

*(The test data is in accordance with ADT Report No.: RF930707L05.)

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.

RADIATED WORST-CASE DATA: BELOW 1GHz (EUT for Router function)

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	2	TESTED BY	Match Tsui

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	53.33	34.97 QP	40.00	-5.03	1.00 V	82	20.59	14.37
2	66.93	36.71 QP	40.00	-3.29	1.00 V	109	23.79	12.93
3	101.92	34.73 QP	43.50	-8.77	1.00 V	268	23.55	11.18
4	133.03	39.12 QP	43.50	-4.38	1.25 V	292	25.18	13.94
5	160.24	39.37 QP	43.50	-4.13	1.00 V	319	24.51	14.87
6	249.66	36.19 QP	46.00	-9.81	1.25 V	301	22.98	13.22
7	319.64	28.74 QP	46.00	-17.26	1.50 V	109	13.79	14.95
8	374.07	30.55 QP	46.00	-15.45	1.00 V	352	14.37	16.18
9	399.34	30.59 QP	46.00	-15.41	1.50 V	106	13.85	16.74
10	465.43	32.13 QP	46.00	-13.87	1.00 V	274	13.86	18.27
11	479.04	39.45 QP	46.00	-6.55	1.00 V	322	21.00	18.45
12	500.42	39.54 QP	46.00	-6.46	1.00 V	286	20.80	18.74
13	599.56	32.78 QP	46.00	-13.22	1.00 V	58	11.79	21.00
14	667.60	31.41 QP	46.00	-14.59	1.50 V	7	9.51	21.90
15	799.78	34.76 QP	46.00	-11.24	1.25 V	325	10.94	23.82
16	961.12	33.71 QP	54.00	-20.29	1.50 V	322	8.03	25.68

*(The test data is in accordance with ADT Report No.: RF930707L05.)

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.

RADIATED WORST-CASE DATA: BELOW 1GHz (EUT for Client function)

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	3	TESTED BY	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	66.93	21.91 QP	40.00	-18.09	2.50 H	214	8.98	12.93
2	133.03	29.49 QP	43.50	-14.01	1.75 H	268	15.55	13.94
3	160.24	26.23 QP	43.50	-17.27	1.00 H	232	11.36	14.87
4	212.73	35.33 QP	43.50	-8.17	1.50 H	46	23.66	11.67
5	236.05	31.67 QP	46.00	-14.33	2.50 H	88	18.83	12.83
6	319.64	33.48 QP	46.00	-12.52	1.00 H	241	18.53	14.95
7	383.79	28.48 QP	46.00	-17.52	2.50 H	319	12.08	16.39
8	399.34	28.55 QP	46.00	-17.45	2.50 H	253	11.81	16.74
9	479.04	39.01 QP	46.00	-6.99	2.00 H	28	20.56	18.45
10	500.42	37.96 QP	46.00	-8.04	1.75 H	250	19.23	18.74
11	533.47	28.70 QP	46.00	-17.30	1.50 H	229	9.32	19.37
12	599.56	31.95 QP	46.00	-14.05	1.50 H	52	10.95	21.00
13	640.38	31.95 QP	46.00	-14.05	1.00 H	337	10.40	21.55
14	700.64	31.44 QP	46.00	-14.56	1.25 H	286	9.12	22.32
15	799.78	33.10 QP	46.00	-12.90	1.00 H	16	9.28	23.82
16	961.12	31.37 QP	54.00	-22.63	1.50 H	262	5.70	25.68

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.

RADIATED WORST-CASE DATA: BELOW 1GHz (EUT for Client function)

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	Below 1000MHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Quasi-Peak
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 62%RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TEST MODE	3	TESTED BY	Match Tsui

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	47.49	31.69 QP	40.00	-8.31	1.00 V	106	16.69	15.00
2	66.93	36.48 QP	40.00	-3.52	1.00 V	139	23.56	12.93
3	101.92	35.15 QP	43.50	-8.35	1.00 V	286	23.98	11.18
4	142.75	34.08 QP	43.50	-9.42	1.00 V	4	19.60	14.48
5	160.24	39.90 QP	43.50	-3.60	1.00 V	325	25.04	14.87
6	249.66	36.50 QP	46.00	-9.50	1.00 V	310	23.28	13.22
7	374.07	29.50 QP	46.00	-16.50	1.00 V	328	13.32	16.18
8	399.34	31.38 QP	46.00	-14.62	1.25 V	100	14.65	16.74
9	479.04	38.41 QP	46.00	-7.59	1.00 V	319	19.95	18.45
10	500.42	38.53 QP	46.00	-7.47	1.00 V	331	19.79	18.74
11	533.47	31.45 QP	46.00	-14.55	1.00 V	346	12.08	19.37
12	599.56	32.38 QP	46.00	-13.62	1.00 V	55	11.38	21.00
13	665.65	33.45 QP	46.00	-12.55	1.00 V	127	11.58	21.87
14	768.68	31.90 QP	46.00	-14.10	1.25 V	16	8.26	23.64
15	799.78	34.72 QP	46.00	-11.28	1.00 V	304	10.90	23.82
16	961.12	33.26 QP	54.00	-20.74	1.00 V	331	7.58	25.68

*(The test data is in accordance with ADT Report No.: RF930707L05.)

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.

802.11b DSSS MODULATION

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1280.00	44.32 PK	74.00	-29.68	1.13 H	206	16.57	27.75
1	1280.00	38.97 AV	54.00	-15.03	1.13 H	206	11.22	27.75
2	1600.00	48.32 PK	74.00	-25.68	1.23 H	178	20.59	27.73
2	1600.00	44.27 AV	54.00	-9.73	1.23 H	178	16.54	27.73
3	2038.00	65.04 PK	74.00	-8.96	1.24 H	160	35.75	29.29
4	2354.00	56.03 PK	74.00	-17.97	1.04 H	168	25.39	30.64
4	2354.00	47.60 AV	54.00	-6.40	1.04 H	168	16.96	30.64
5	2390.00	51.09 PK	74.00	-22.91	1.01 H	172	20.30	30.79
5	2390.00	43.06 AV	54.00	-10.94	1.01 H	172	12.27	30.79
6	*2412.00	110.09 PK			1.01 H	172	79.21	30.88
6	*2412.00	102.06 AV			1.01 H	172	71.18	30.88
7	4824.00	49.33 PK	74.00	-24.67	1.00 H	89	12.88	36.45
7	4824.00	35.98 AV	54.00	-18.02	1.00 H	89	-0.47	36.45

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	1280.00	45.72 PK	74.00	-28.28	1.17 V	137	17.97	27.75
1	1280.00	40.19 AV	54.00	-13.81	1.17 V	137	12.44	27.75
2	1600.00	45.62 PK	74.00	-28.38	1.00 V	108	17.89	27.73
2	1600.00	41.19 AV	54.00	-12.81	1.00 V	108	13.46	27.73
3	2038.00	57.43 PK	74.00	-16.57	1.24 V	140	28.14	29.29
4	2390.00	45.67 PK	74.00	-28.33	1.01 V	140	14.88	30.79
4	2390.00	37.62 AV	54.00	-16.38	1.01 V	140	6.83	30.79
5	*2412.00	104.67 PK			1.01 V	140	73.79	30.88
5	*2412.00	96.62 AV			1.01 V	140	65.74	30.88
6	4824.00	50.54 PK	74.00	-23.46	1.17 V	180	14.09	36.45
6	4824.00	37.35	54.00	-16.65	1.17 V	180	0.9	36.45

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1600.00	49.04 PK	74.00	-24.96	1.22 H	1	21.31	27.73
1	1600.00	45.78 AV	54.00	-8.22	1.22 H	1	18.05	27.73
2	2063.00	61.27 PK	74.00	-12.73	1.23 H	338	31.91	29.36
3	2222.00	53.18 PK	74.00	-20.82	1.13 H	352	23.19	29.99
3	2222.00	47.69 AV	54.00	-6.31	1.13 H	352	17.70	29.99
4	*2437.00	108.11 PK			1.26 H	346	77.13	30.98
4	*2437.00	99.20 AV			1.26 H	346	68.22	30.98
5	2662.00	53.91 PK	74.00	-20.09	1.13 H	350	22.35	31.56
5	2662.00	47.73 AV	54.00	-6.27	1.13 H	350	16.17	31.56
6	4874.00	52.25 PK	74.00	-21.75	1.21 H	5	15.64	36.61
6	4874.00	38.64 AV	54.00	-15.36	1.21 H	5	2.03	36.61

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	1600.00	46.51 PK	74.00	-27.49	1.00 V	1	18.78	27.73
1	1600.00	42.22 AV	54.00	-11.78	1.00 V	1	14.49	27.73
2	2063.00	59.06 PK	74.00	-14.94	1.52 V	274	29.70	29.36
3	2222.00	45.56 PK	74.00	-28.44	1.51 V	103	15.57	29.99
3	2222.00	38.68 AV	54.00	-15.32	1.51 V	103	8.69	29.99
4	*2437.00	104.29 PK			1.19 V	273	73.31	30.98
4	*2437.00	96.19 AV			1.19 V	273	65.21	30.98
5	2662.00	51.34 PK	74.00	-22.66	1.08 V	294	19.78	31.56
5	2662.00	44.80 AV	54.00	-9.20	1.08 V	294	13.24	31.56
6	4874.00	52.76 PK	74.00	-21.24	1.06 V	335	16.15	36.61
6	4874.00	40.35 AV	54.00	-13.65	1.06 V	335	3.74	36.61
7	7311.00	58.54 PK	74.00	-15.46	1.06 V	302	15.25	43.29
7	7311.00	46.40 AV	54.00	-7.60	1.06 V	302	3.11	43.29

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	CCK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	11Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Match Tsui		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1600.00	50.39 PK	74.00	-23.61	1.25 H	185	22.66	27.73
1	1600.00	46.90 AV	54.00	-7.10	1.25 H	185	19.17	27.73
2	2088.00	67.01 PK	74.00	-6.99	1.22 H	175	37.59	29.42
3	2354.00	50.60 PK	74.00	-23.40	1.22 H	168	19.96	30.64
3	2354.00	43.67 AV	54.00	-10.33	1.22 H	168	13.03	30.64
4	*2462.00	111.35 PK			1.00 H	173	80.27	31.08
4	*2462.00	103.34 AV			1.00 H	173	72.26	31.08
5	2500.00	56.72 PK	74.00	-17.28	1.00 H	173	25.48	31.24
5	2500.00	48.71 AV	54.00	-5.29	1.00 H	173	17.47	31.24
6	4924.00	48.66 PK	74.00	-25.34	1.20 H	96	11.86	36.80
6	4924.00	35.45 AV	54.00	-18.55	1.20 H	96	-1.35	36.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1600.00	47.38 PK	74.00	-26.62	1.28 V	140	19.65	27.73
1	1600.00	43.72 AV	54.00	-10.28	1.28 V	140	15.99	27.73
2	2088.00	58.67 PK	74.00	-15.33	1.18 V	153	29.25	29.42
3	*2462.00	103.87 PK			1.00 V	147	72.79	31.08
3	*2462.00	95.91 AV			1.00 V	147	64.83	31.08
4	2500.00	49.24 PK	74.00	-24.76	1.00 V	147	18.00	31.24
4	2500.00	41.28 AV	54.00	-12.72	1.00 V	147	10.04	31.24
5	4924.00	51.33 PK	74.00	-22.67	1.26 V	180	14.53	36.80
5	4924.00	37.58 AV	54.00	-16.42	1.26 V	180	0.78	36.80

*(The test data is in accordance with ADT Report No.: RF930707L05.)

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

802.11g OFDM MODULATION

EUT	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	1600.00	47.68 PK	74.00	-26.32	1.00 H	266	19.95	27.73
1	1600.00	43.44 AV	54.00	-10.56	1.00 H	266	15.71	27.73
2	2038.00	65.77 PK	74.00	-8.23	1.00 H	169	36.48	29.29
3	2354.00	57.68 PK	74.00	-16.32	1.04 H	165	27.04	30.64
3	2354.00	47.08 AV	54.00	-6.92	1.04 H	165	16.44	30.64
4	2390.00	55.84 PK	74.00	-18.16	1.02 H	171	25.05	30.79
4	2390.00	46.35 AV	54.00	-7.65	1.02 H	171	15.56	30.79
5	*2412.00	105.54 PK			1.02 H	171	74.66	30.88
5	*2412.00	96.05 AV			1.02 H	171	65.17	30.88
6	4824.00	47.82 PK	74.00	-26.18	1.27 H	217	11.37	36.45
6	4824.00	34.90 AV	54.00	-19.10	1.27 H	217	-1.55	36.45

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	1600.00	45.55 PK	74.00	-28.45	1.29 V	110	17.82	27.73
1	1600.00	41.67 AV	54.00	-12.33	1.29 V	110	13.94	27.73
2	2038.00	58.96 PK	74.00	-15.04	1.25 V	124	29.67	29.29
3	2390.00	49.28 PK	74.00	-24.72	1.03 V	141	18.49	30.79
3	2390.00	39.87 AV	54.00	-14.13	1.03 V	141	9.08	30.79
4	*2412.00	98.98 PK			1.03 V	141	68.10	30.88
4	*2412.00	89.57 AV			1.03 V	141	58.69	30.88
5	4824.00	47.08 PK	74.00	-26.92	1.05 V	178	10.63	36.45
5	4824.00	34.67 AV	54.00	-19.33	1.05 V	178	-1.78	36.45

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	1600.00	49.47 PK	74.00	-24.53	1.20 H	5	21.74	27.73
1	1600.00	45.26 AV	54.00	-8.74	1.20 H	5	17.53	27.73
2	2063.00	62.06 PK	74.00	-11.94	1.24 H	345	32.70	29.36
3	2354.00	52.42 PK	74.00	-21.58	1.30 H	341	21.78	30.64
3	2354.00	44.84 AV	54.00	-9.16	1.30 H	341	14.20	30.64
4	*2437.00	102.85 PK			1.25 H	347	71.87	30.98
4	*2437.00	93.38 AV			1.25 H	347	62.40	30.98
5	2662.00	50.22 PK	74.00	-23.78	1.21 H	39	18.66	31.56
5	2662.00	43.97 AV	54.00	-10.03	1.21 H	39	12.41	31.56
6	4874.00	49.27 PK	74.00	-24.73	1.25 H	22	12.66	36.61
6	4874.00	35.37 AV	54.00	-18.63	1.25 H	22	-1.24	36.61

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	1600.00	48.26 PK	74.00	-25.74	1.30 V	312	20.53	27.73
1	1600.00	44.16 AV	54.00	-9.84	1.30 V	312	16.43	27.73
2	2063.00	59.32 PK	74.00	-14.68	1.22 V	319	29.96	29.36
3	2354.00	49.28 PK	74.00	-24.72	1.21 V	18	18.64	30.64
3	2354.00	41.32 AV	54.00	-12.68	1.21 V	18	10.68	30.64
4	*2437.00	98.68 PK			1.19 V	272	67.70	30.98
4	*2437.00	89.32 AV			1.19 V	272	58.34	30.98
5	2662.00	49.37 PK	74.00	-24.63	1.16 V	114	17.81	31.56
5	2662.00	42.43 AV	54.00	-11.57	1.16 V	114	10.87	31.56
6	4874.00	48.92 PK	74.00	-25.08	1.22 V	332	12.31	36.61
6	4874.00	35.45 AV	54.00	-18.55	1.22 V	332	-1.16	36.61

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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	Wireless LAN Pocket AP	MEASUREMENT DETAIL	
MODEL	WLG-2008	FREQUENCY RANGE	1 ~ 25GHz
CHANNEL	Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TRANSFER RATE	6Mbps	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Benson Wei		

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	1600.00	51.36 PK	74.00	-22.64	1.22 H	184	23.63	27.73
1	1600.00	48.08 AV	54.00	-5.92	1.22 H	184	20.35	27.73
2	2088.00	67.43 PK	74.00	-6.57	1.21 H	176	38.01	29.42
3	2354.00	57.81 PK	74.00	-16.19	1.23 H	151	27.17	30.64
3	2354.00	50.75 AV	54.00	-3.25	1.23 H	151	20.11	30.64
4	*2462.00	105.20 PK			1.00 H	177	74.12	31.08
4	*2462.00	96.07 AV			1.00 H	177	64.99	31.08
5	2484.00	57.24 PK	74.00	-16.76	1.00 H	177	26.07	31.17
5	2484.00	48.11 AV	54.00	-5.89	1.00 H	177	16.94	31.17
6	4924.00	48.69 PK	74.00	-25.31	1.19 H	100	11.89	36.80
6	4924.00	3.88 AV	54.00	-18.12	1.19 H	100	-0.92	36.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1600.00	47.60 PK	74.00	-26.40	1.28 V	133	19.87	27.73
1	1600.00	43.92 AV	54.00	-10.08	1.28 V	133	16.19	27.73
2	2088.00	61.68 PK	74.00	-12.32	1.18 V	136	32.26	29.42
3	*2462.00	99.65 PK			1.00 V	151	68.57	31.08
3	*2462.00	90.30 AV			1.00 V	151	59.22	31.08
4	2484.00	51.69 PK	74.00	-22.31	1.00 V	151	20.52	31.17
4	2484.00	42.34 AV	54.00	-11.66	1.00 V	151	11.17	31.17
5	4924.00	47.90 PK	74.00	-26.10	1.31 V	328	11.10	36.80
5	4924.00	34.82 AV	54.00	-19.18	1.31 V	328	-1.98	36.80

*(The test data is in accordance with ADT Report No.: RF930707L05.)

- 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.



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSEK 30	100049	Aug. 12, 2004

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

4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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



4.3.7 TEST RESULTS

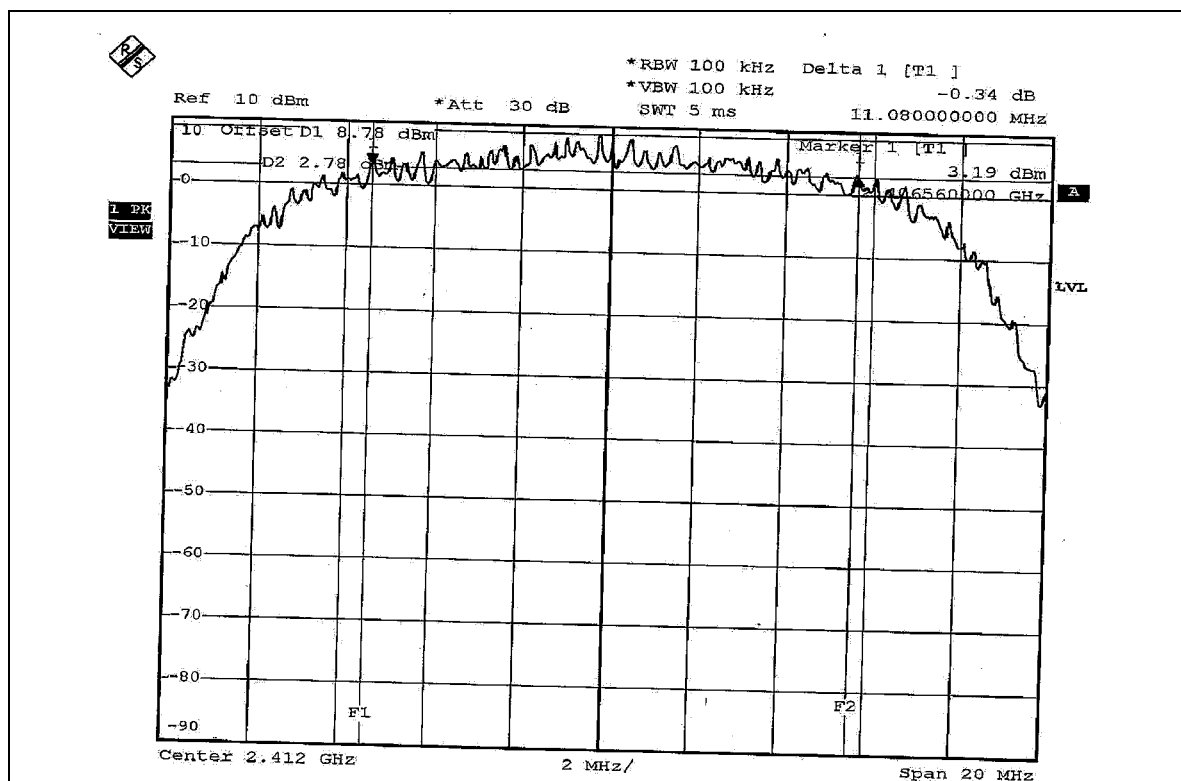
802.11b DSSS MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 64RH 991hPa
TESTED BY	Steven Lu		

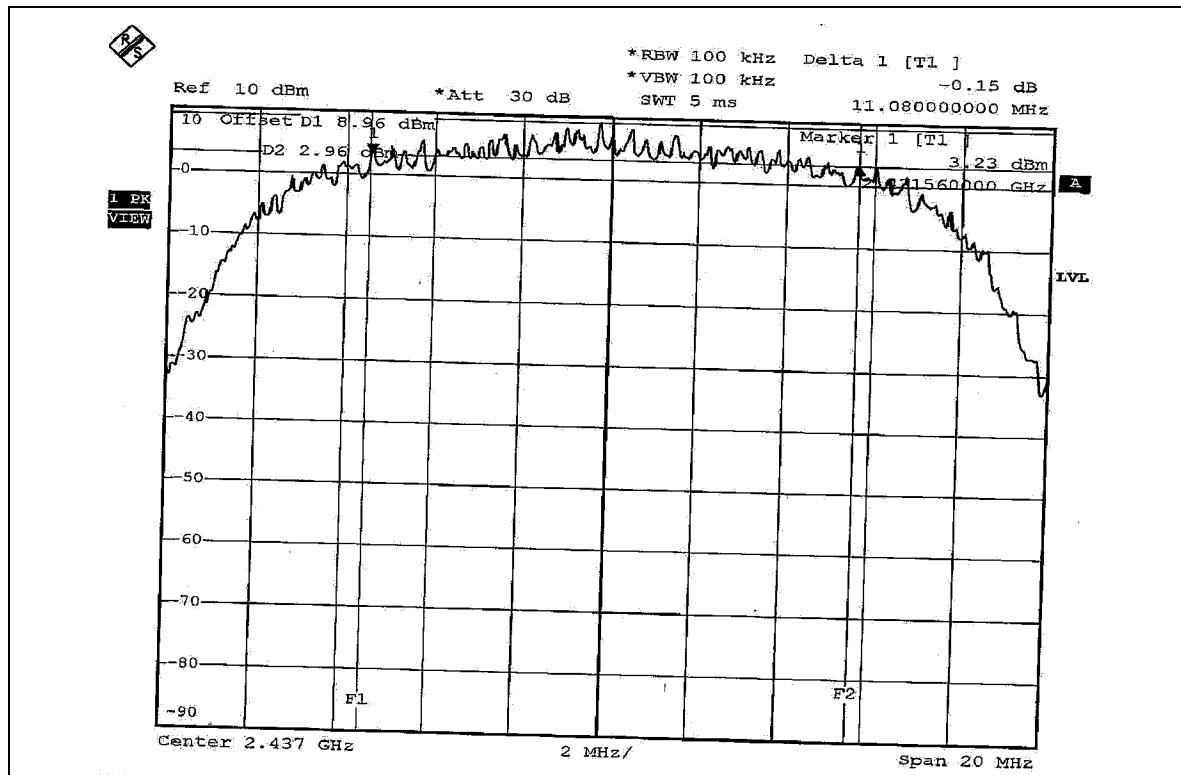
CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	11.08	0.5	PASS
6	2437	11.08	0.5	PASS
11	2462	11.04	0.5	PASS

*(The test data is in accordance with ADT Report No.: RF930707L05.)

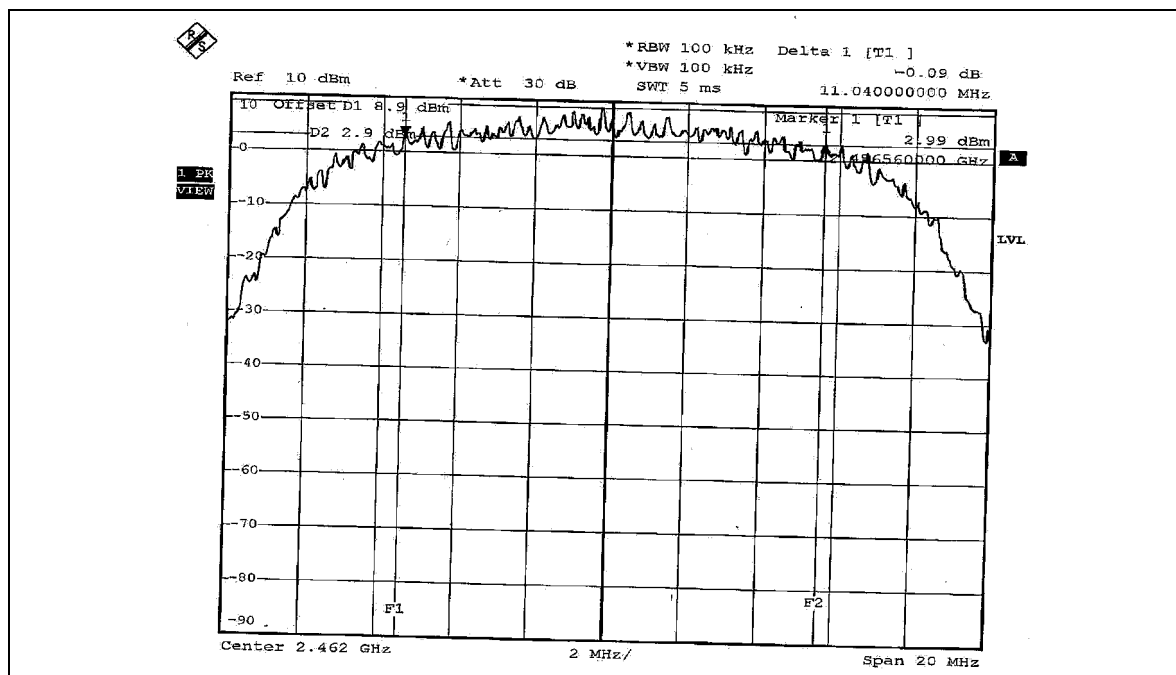
CH1



CH6



CH11





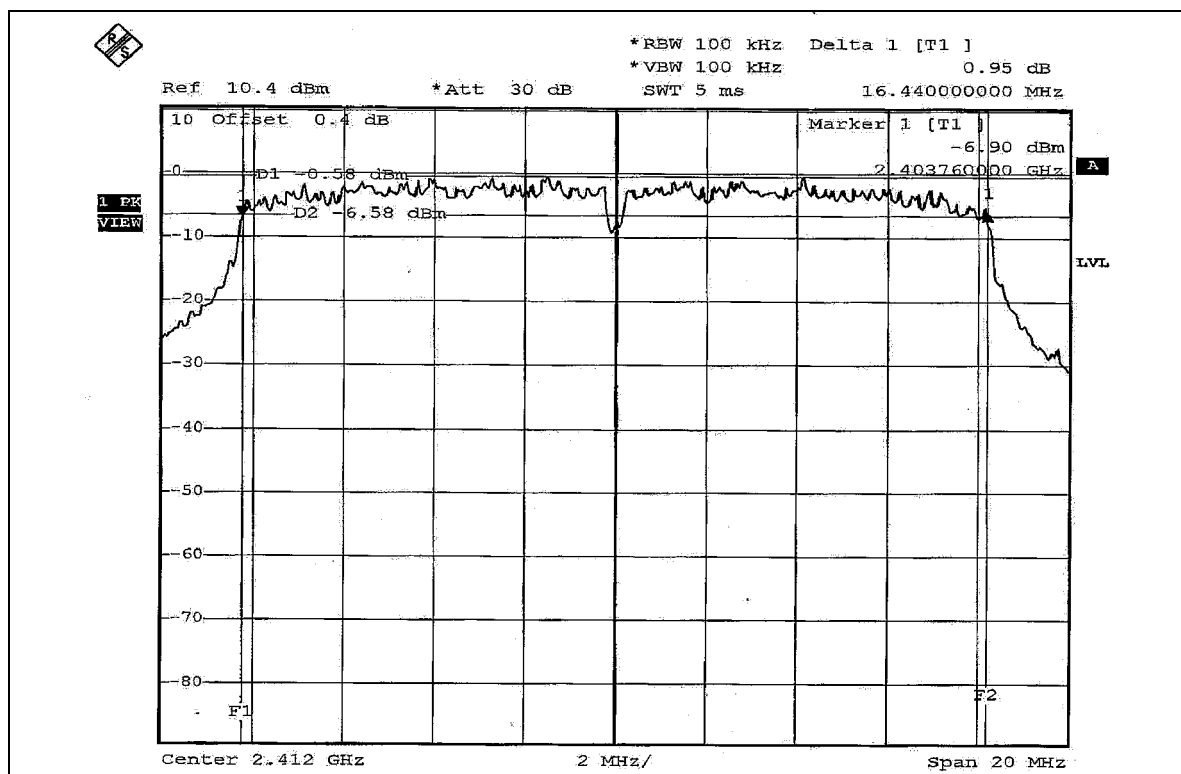
802.11g OFDM MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 67RH, 991hPa
TESTED BY	Steven Lu		

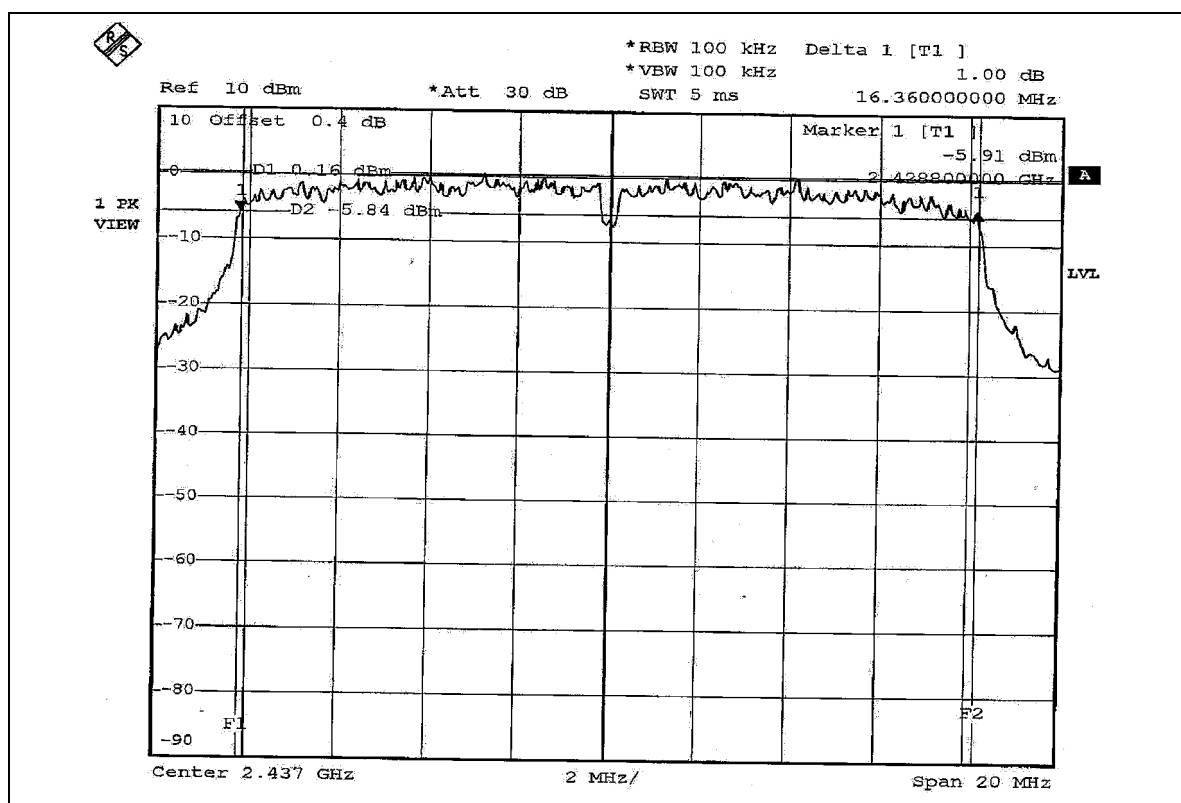
CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	16.44	0.5	PASS
6	2437	16.36	0.5	PASS
11	2462	17.56	0.5	PASS

*(The test data is in accordance with ADT Report No.: RF930707L05.)

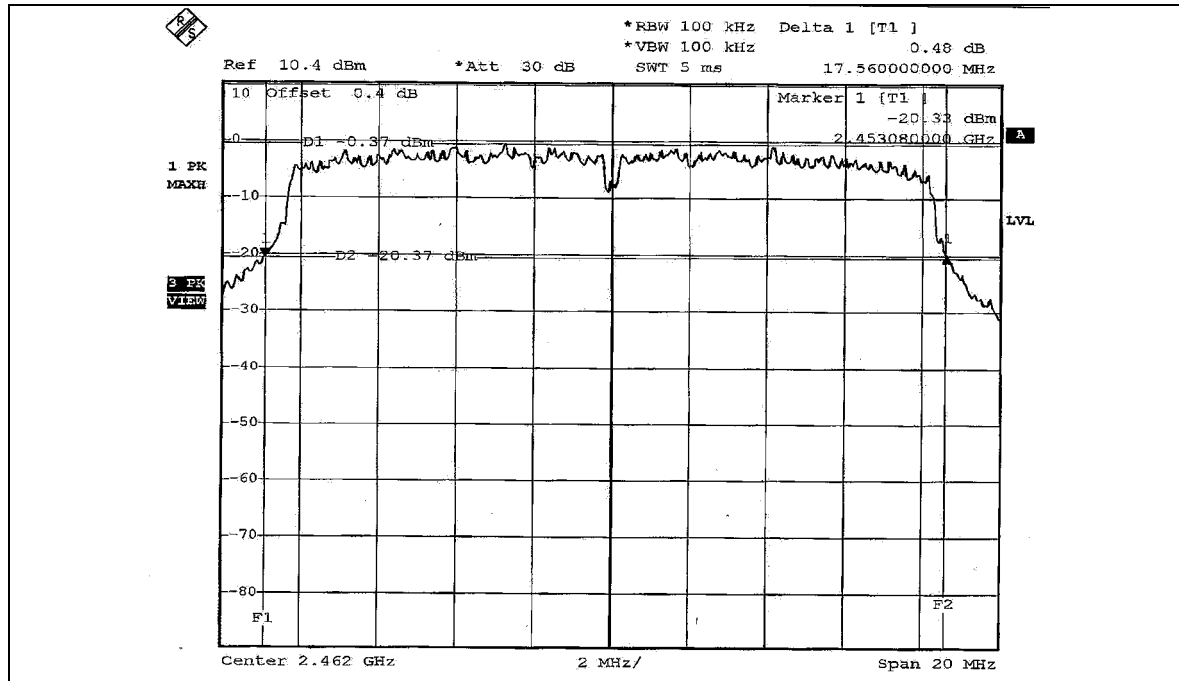
CH1



CH6



CH11



4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004
AGILENT SIGNAL GENERATOR	E8257C	MY43320668	Dec. 31, 2004
TEKTRONIX OSCILLOSCOPE	TDS 220	C019167	Feb. 1, 2005
NARDA DETECTOR	4503A	FSCM99899	NA

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

4.4.3 TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6

4.4.7 TEST RESULTS

802.11b DSSS MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 64RH 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	63.241	18.01	30	PASS
6	2437	63.096	18.00	30	PASS
11	2462	63.533	18.03	30	PASS

802.11g OFDM MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 64RH 991hPa
TESTED BY	Steven Lu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	31.623	15.00	30	PASS
6	2437	31.842	15.03	30	PASS
11	2462	31.769	15.02	30	PASS

*(The test data is in accordance with ADT Report No.: RF930707L05.)



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

4.5.3 TEST PROCEDURE

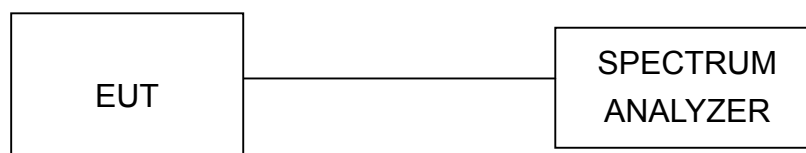
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



4.5.7 TEST RESULTS

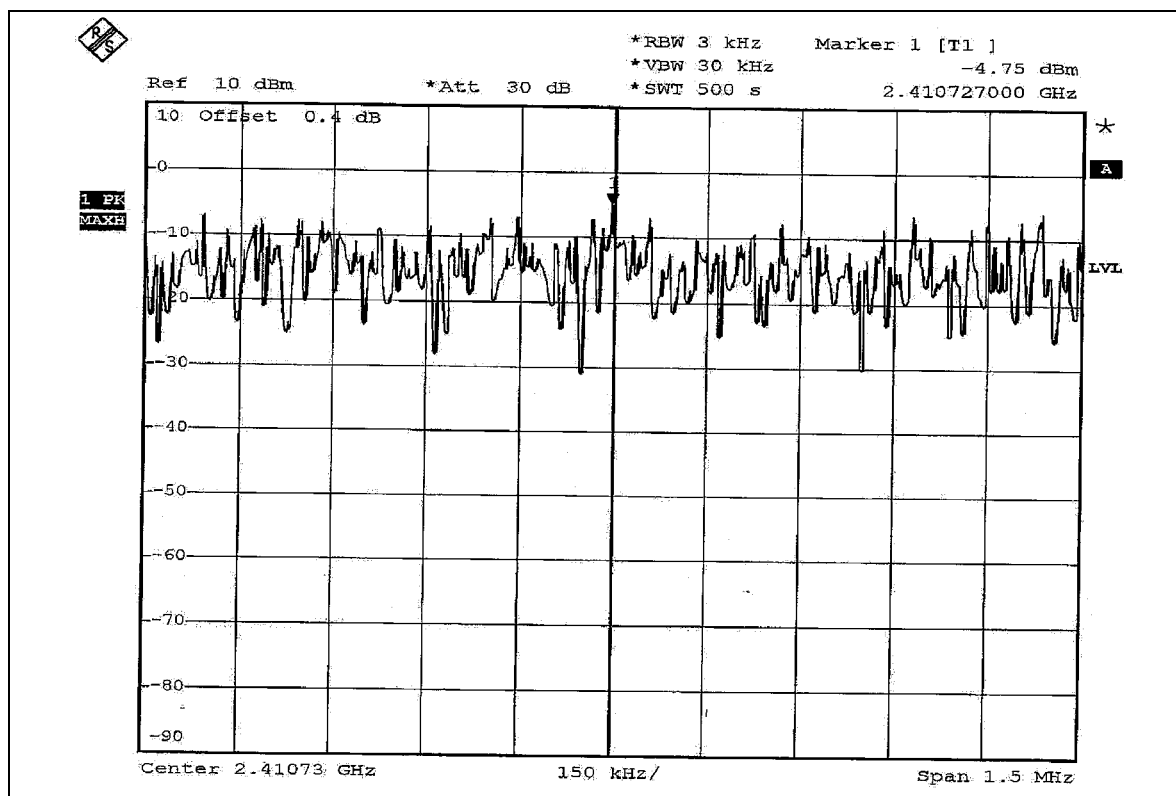
802.11b DSSS MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	CCK	TRANSFER RATE	11Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 64RH 991hPa
TESTED BY	Steven Lu		

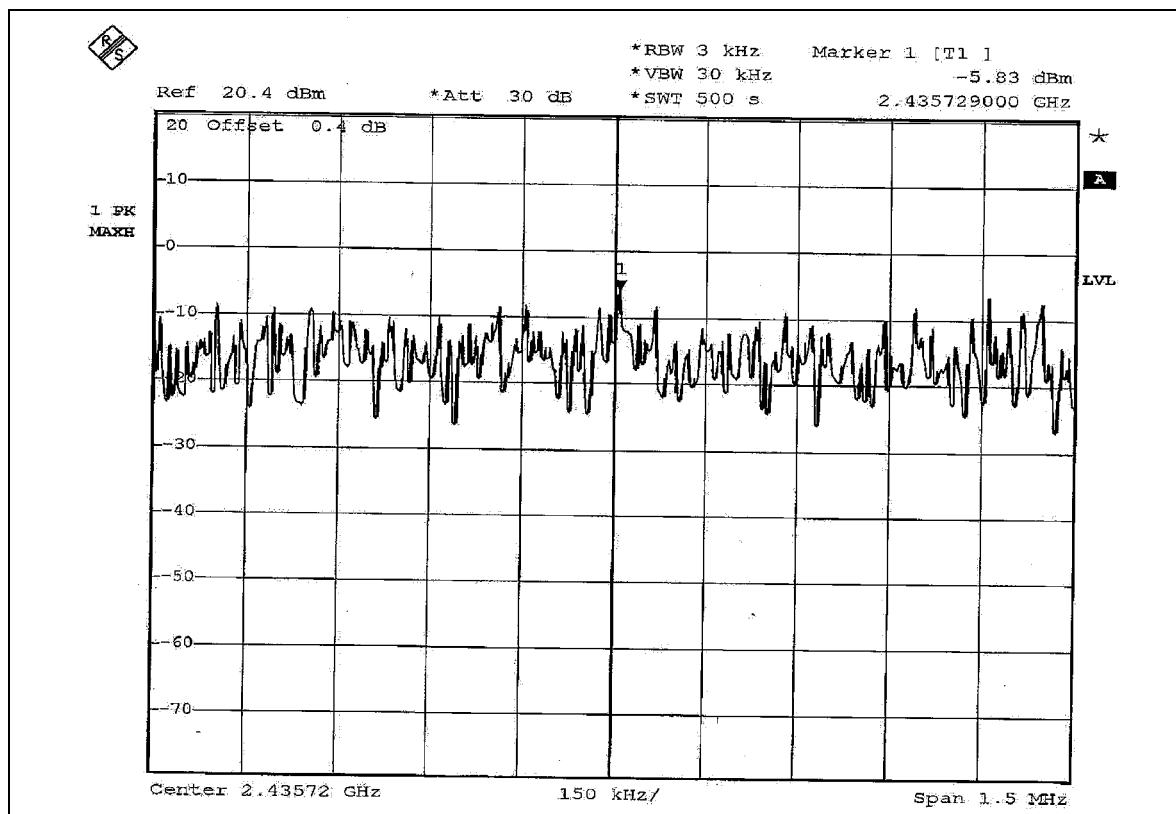
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-4.75	8	PASS
6	2437	-5.83	8	PASS
11	2462	-5.36	8	PASS

*(The test data is in accordance with ADT Report No.: RF930707L05.)

CH1



CH6



Ref 10 dBm *Att 30 dB *RBW 3 kHz Marker 1 [T1] -5.36 dBm
 *VBW 30 kHz *SWT 500 s 2.461330000 GHz

10 Offset 0.4 dB

1 PK
 VLOW

LVL

Center 2.46133 GHz 150 kHz/ span 1.5 MHz



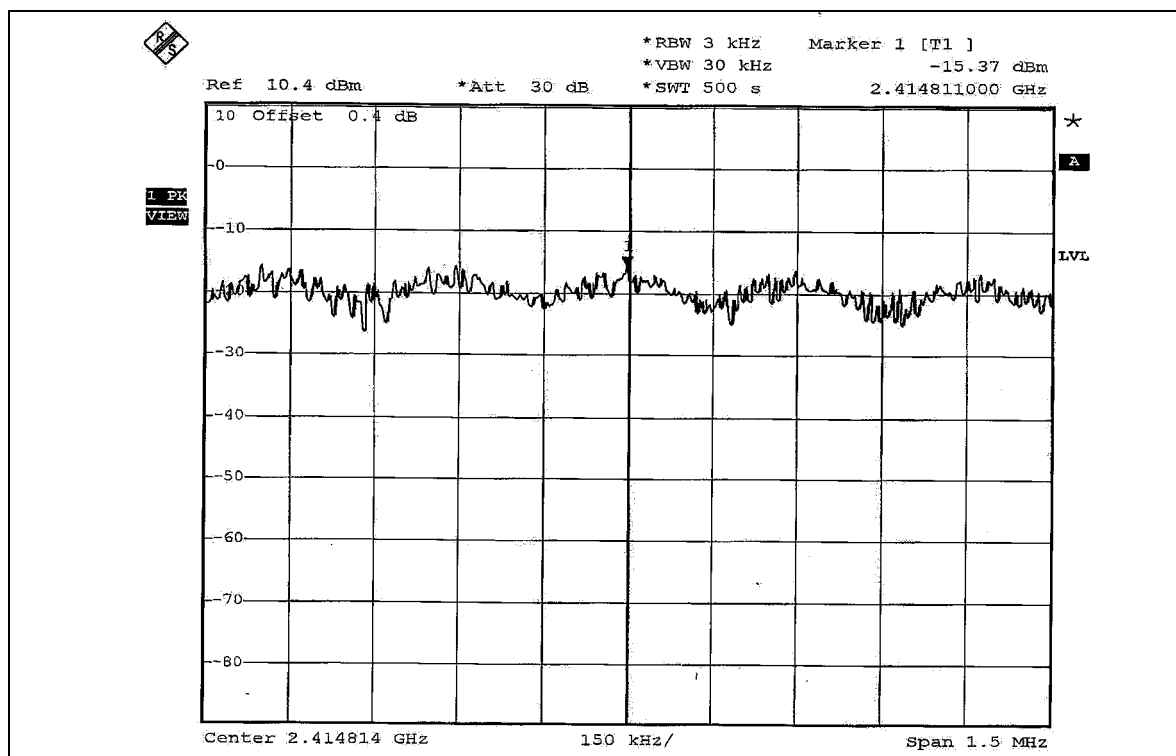
802.11g OFDM MODULATION

EUT	Wireless LAN Pocket AP	MODEL	WLG-2008
MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 64RH 991hPa
TESTED BY	Steven Lu		

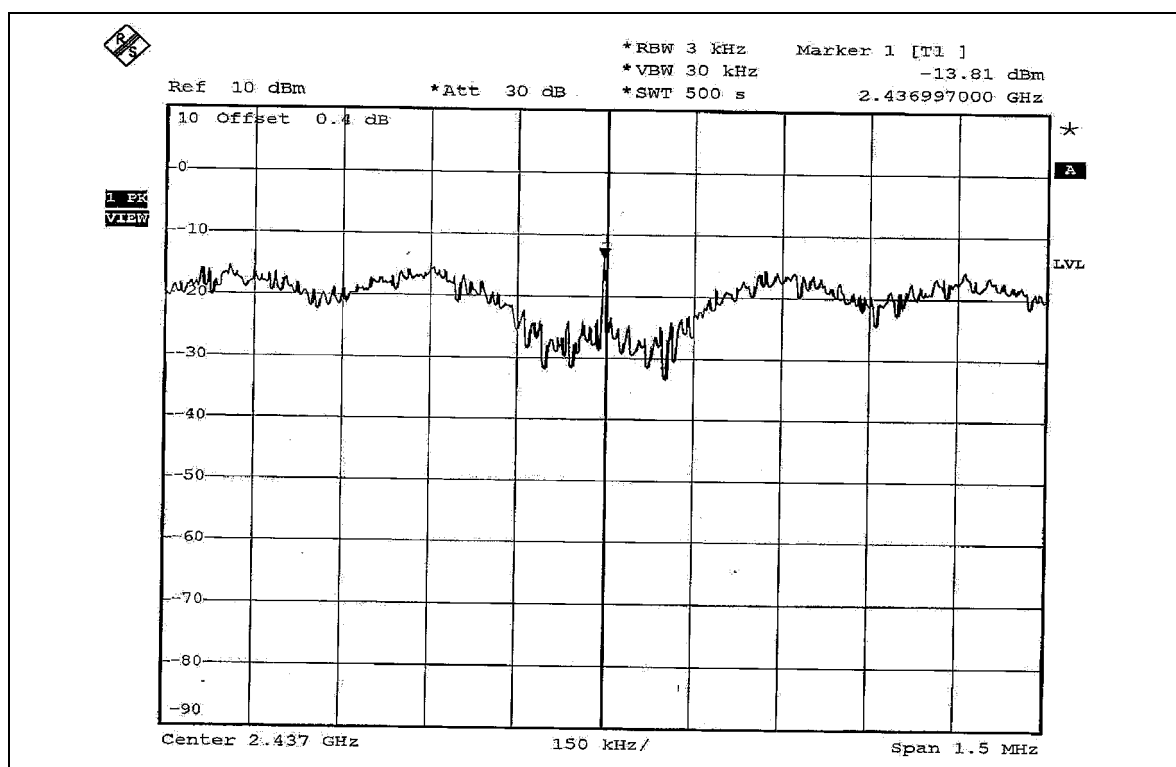
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-15.37	8	PASS
6	2437	-13.81	8	PASS
11	2462	-15.19	8	PASS

*(The test data is in accordance with ADT Report No.: RF930707L05.)

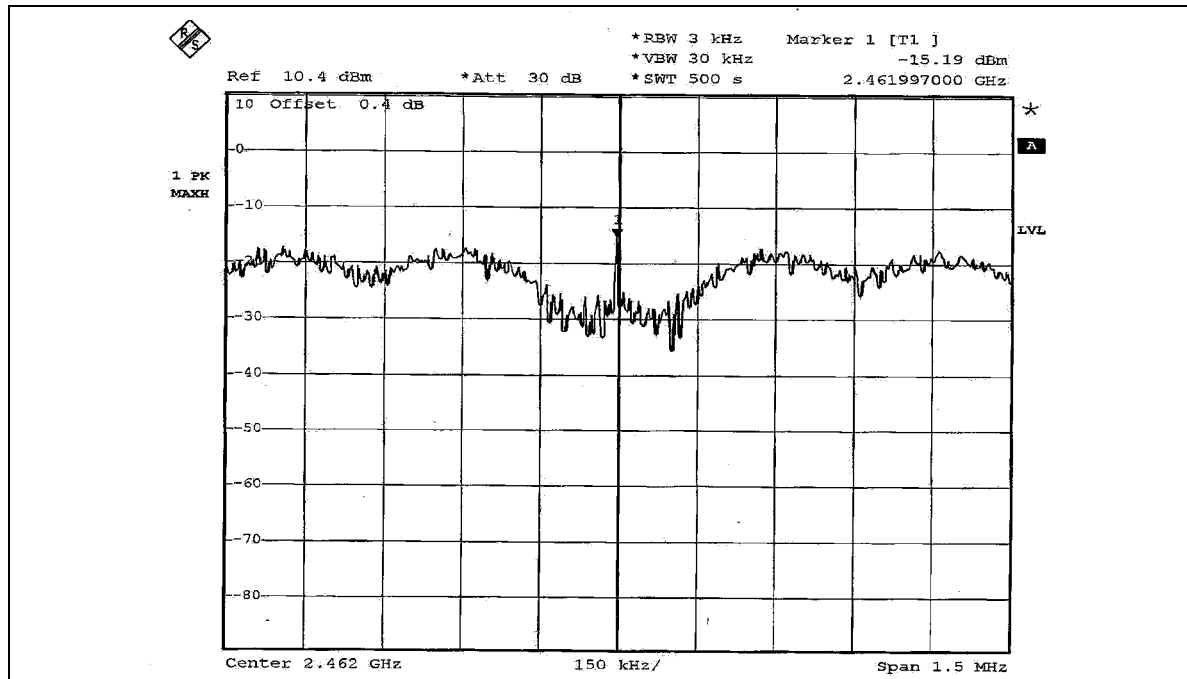
CH1



CH6



CH11



4.6 BAND EDGES 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 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2004

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

4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz and 100 kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW=VBW=100kHz; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.6 TEST RESULTS

The spectrum plots are attached on the following 12 images. D2 line indicates the highest level, and D1 line indicates the 20dB offset below D2. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION

NOTE 1:

The band edge emission plot on page 56 show 53.02dBc delta between carrier maximum power and local maximum emission in restrict band (2.3220GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 110.09dBuV/m (Peak), so the maximum field strength in restrict band is $110.09 - 53.02 = 57.07\text{dBuV/m}$, which is under 74dBuV/m limit.

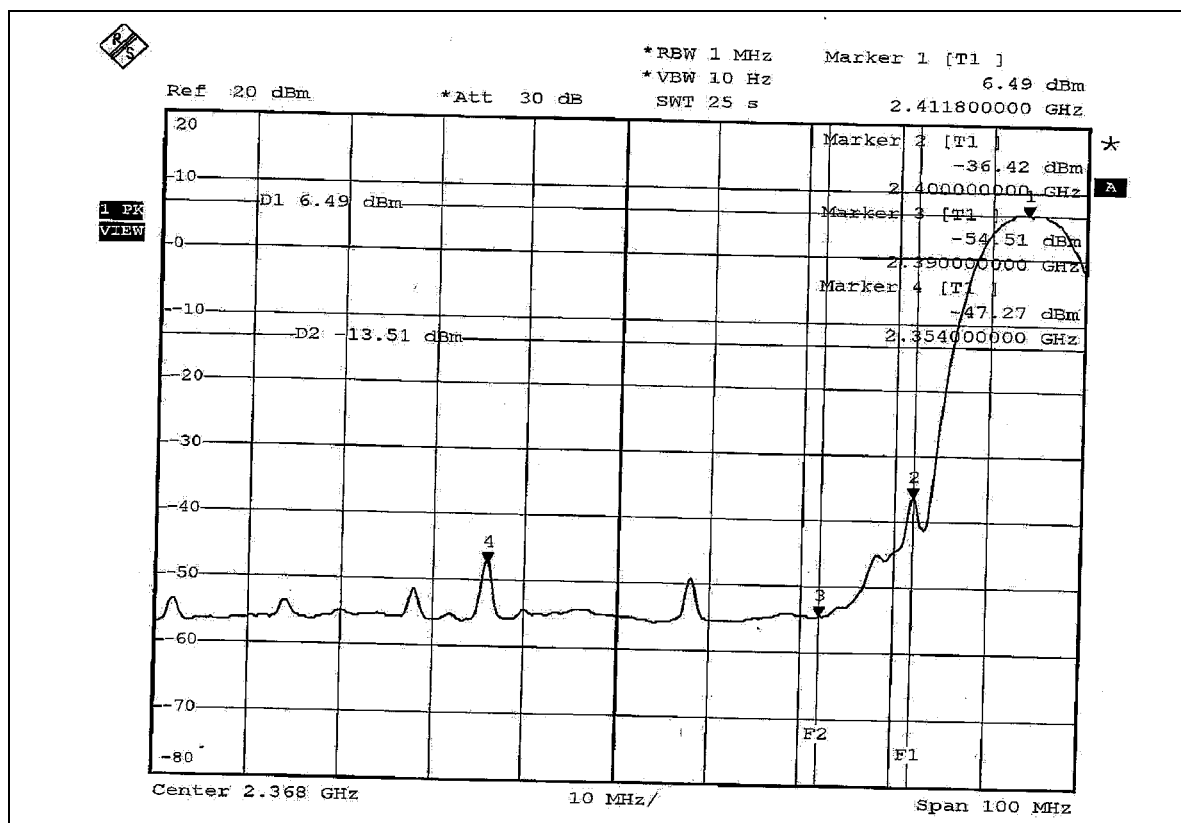
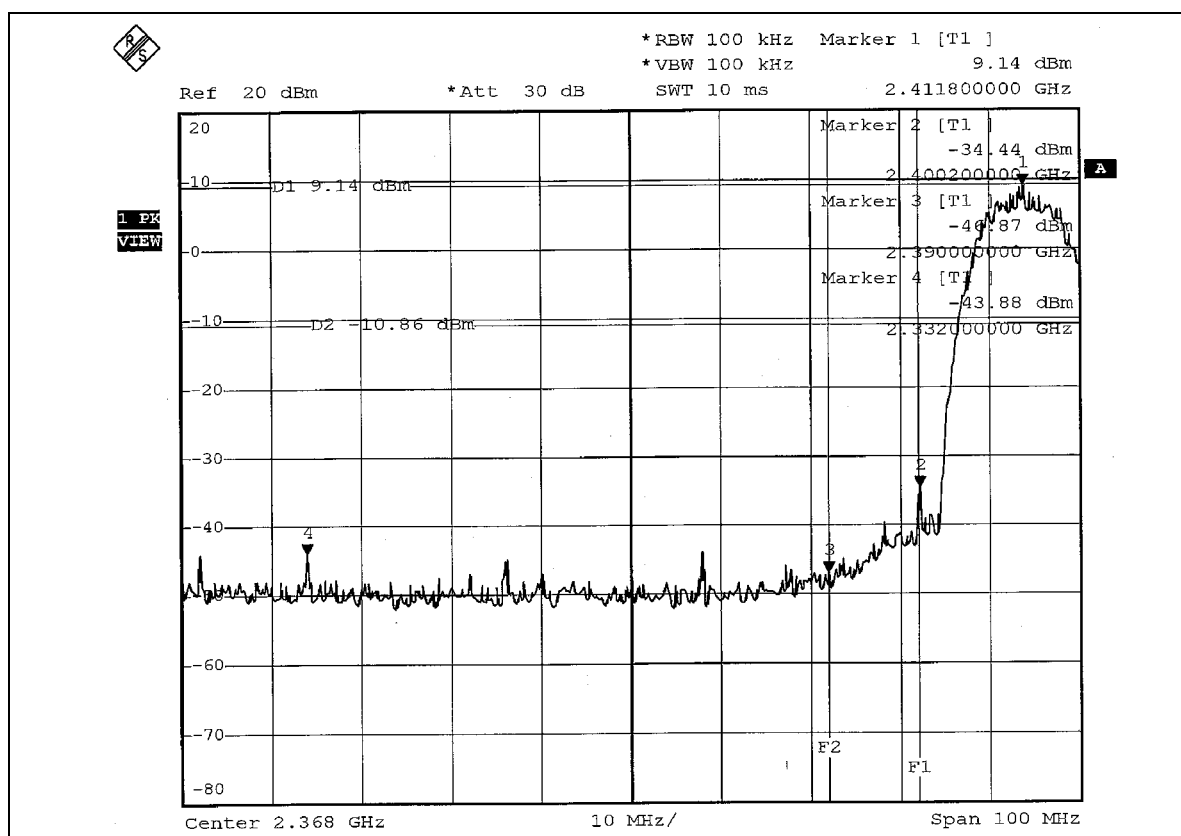
The band edge emission plot on page 56 show 53.76dBc delta between carrier maximum power and local maximum emission in restrict band (2.3540GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 102.06dBuV/m (Average), so the maximum field strength in restrict band is $102.06 - 53.76 = 48.30\text{dBuV/m}$, which is under 54dBuV/m limit.

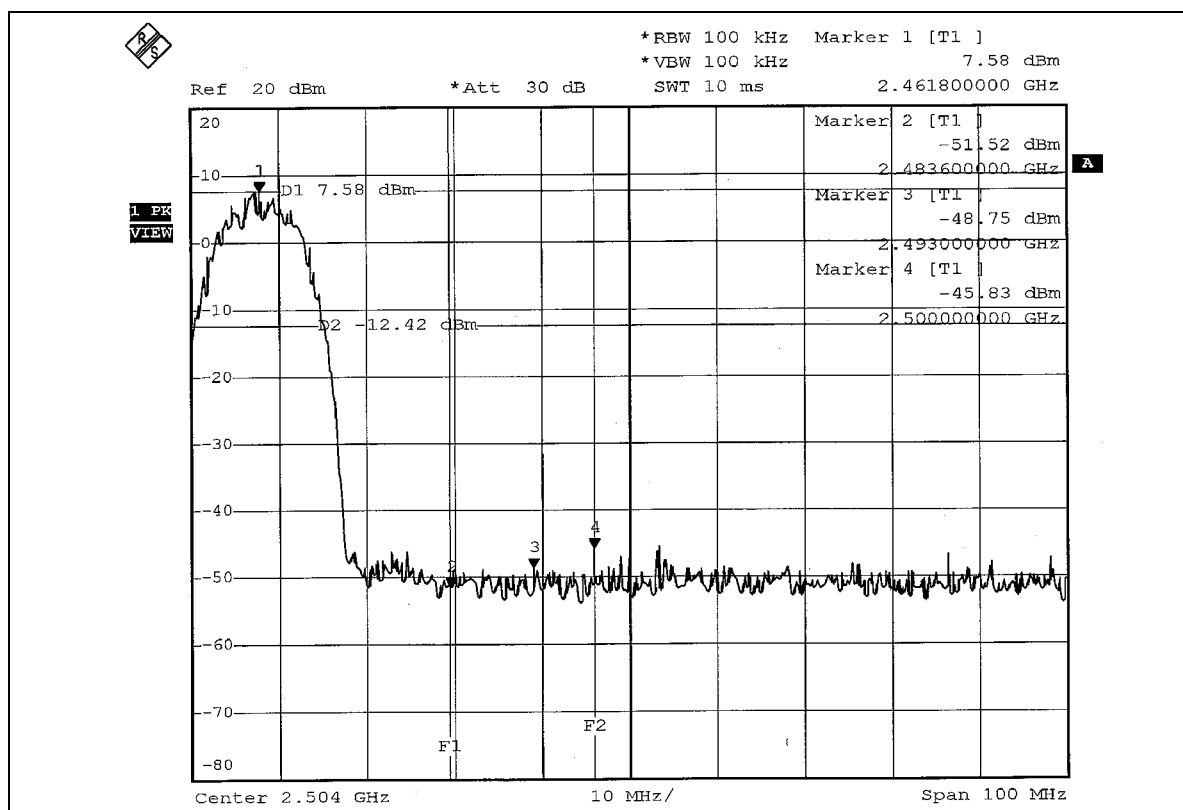
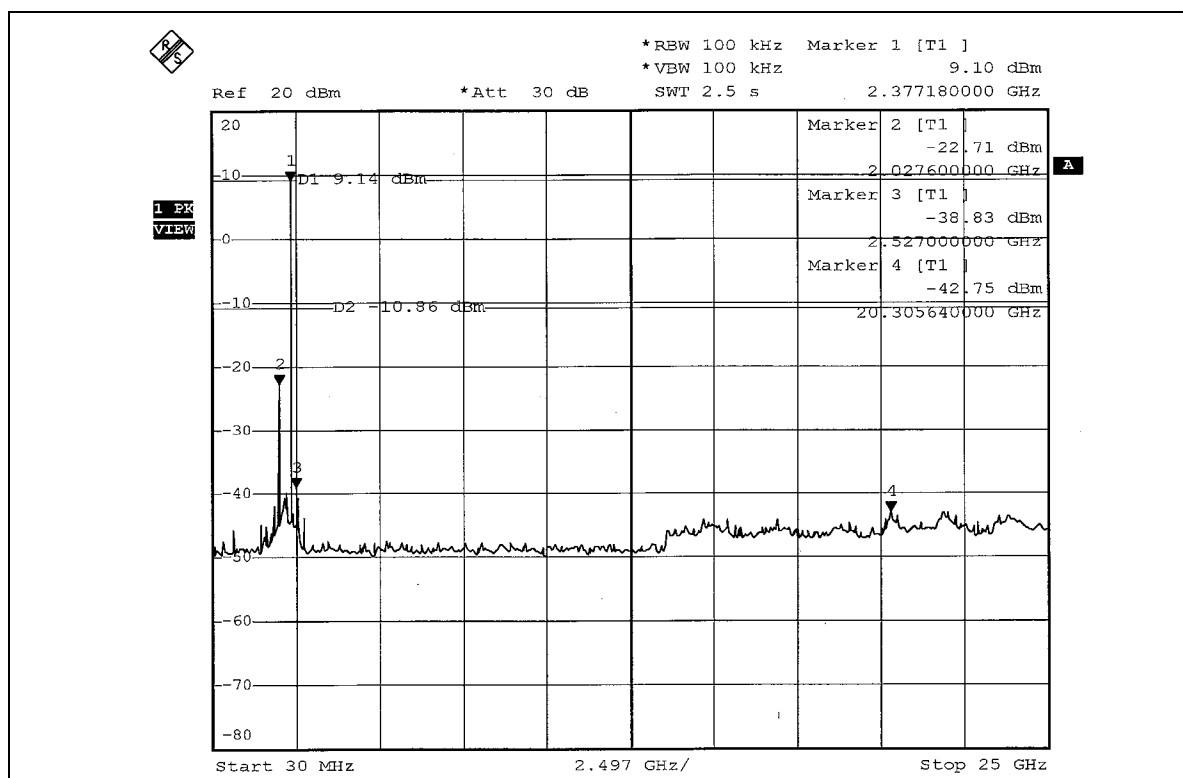
NOTE 2:

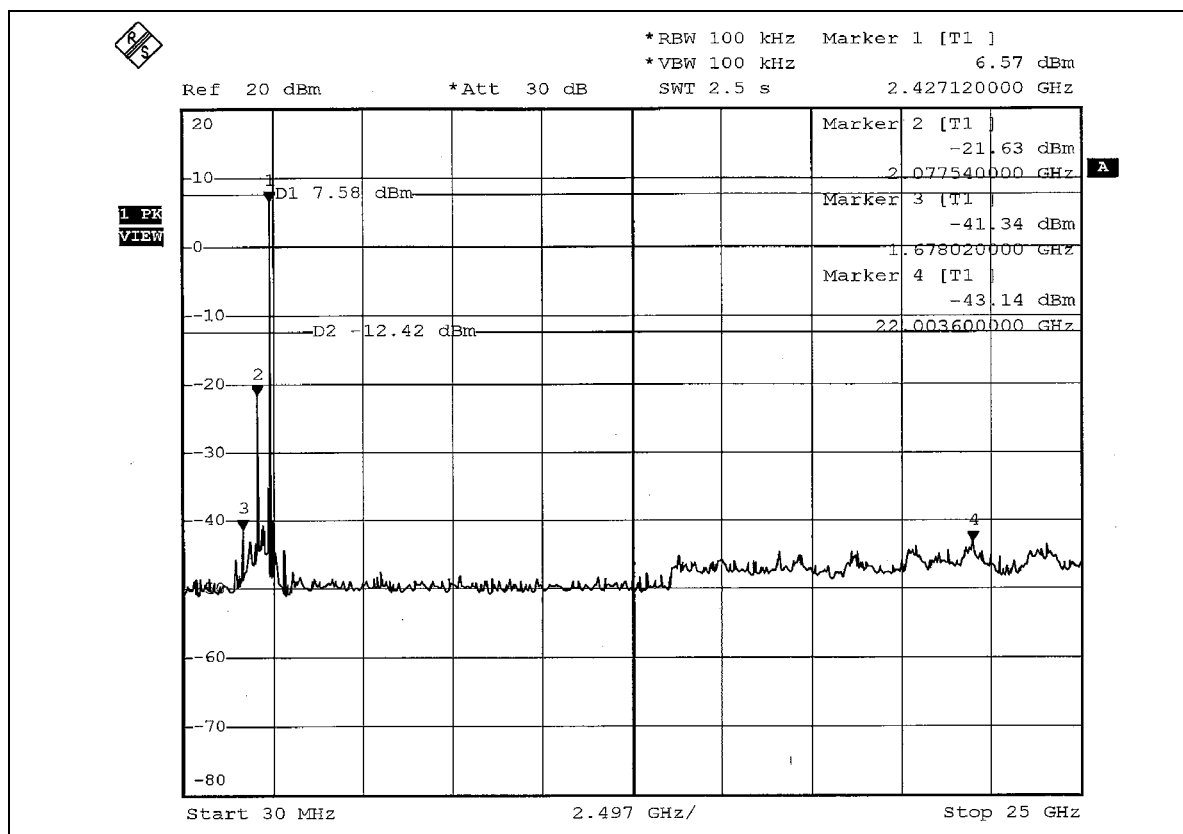
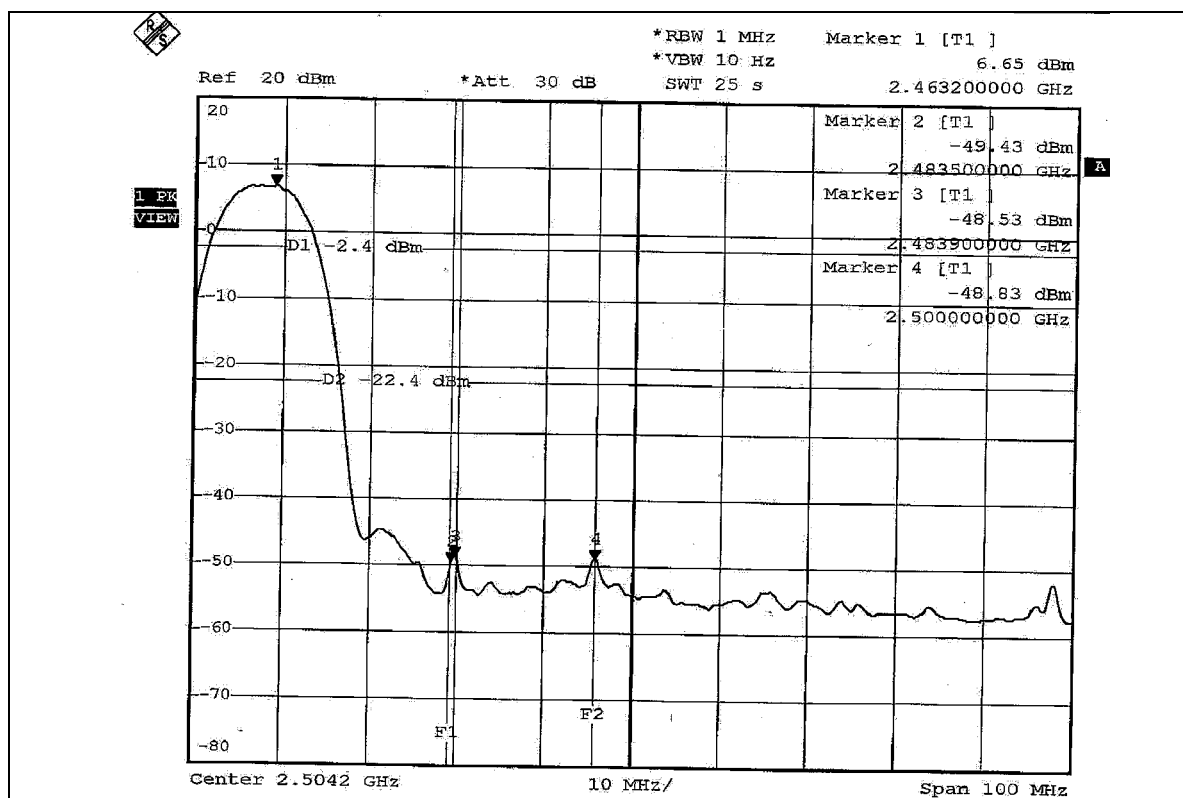
The band edge emission plot on the page 57 show 56.33dBc delta between carrier maximum power and local maximum emission in restrict band (2.4930GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 111.35dBuV/m (Peak), so the maximum field strength in restrict band is $111.35 - 56.33 = 55.02\text{dBuV/m}$, which is under 74dBuV/m limit.

The band edge emission plot on the page 58 show 55.18dBc delta between carrier maximum power and local maximum emission in restrict band (2.4839GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 103.34dBuV/m (Average), so the maximum field strength in restrict band is $103.34 - 55.18 = 48.16\text{dBuV/m}$, which is under 54dBuV/m limit.

*(The test data is in accordance with ADT Report No.: RF930707L05.)









802.11g OFDM MODULATION

NOTE 1:

The band edge emission plot on page 60 show 44.04dBc delta between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 105.54dBuV/m (Peak), so the maximum field strength in restrict band is $105.54 - 44.04 = 61.50$ dBuV/m, which is under 74dBuV/m limit.

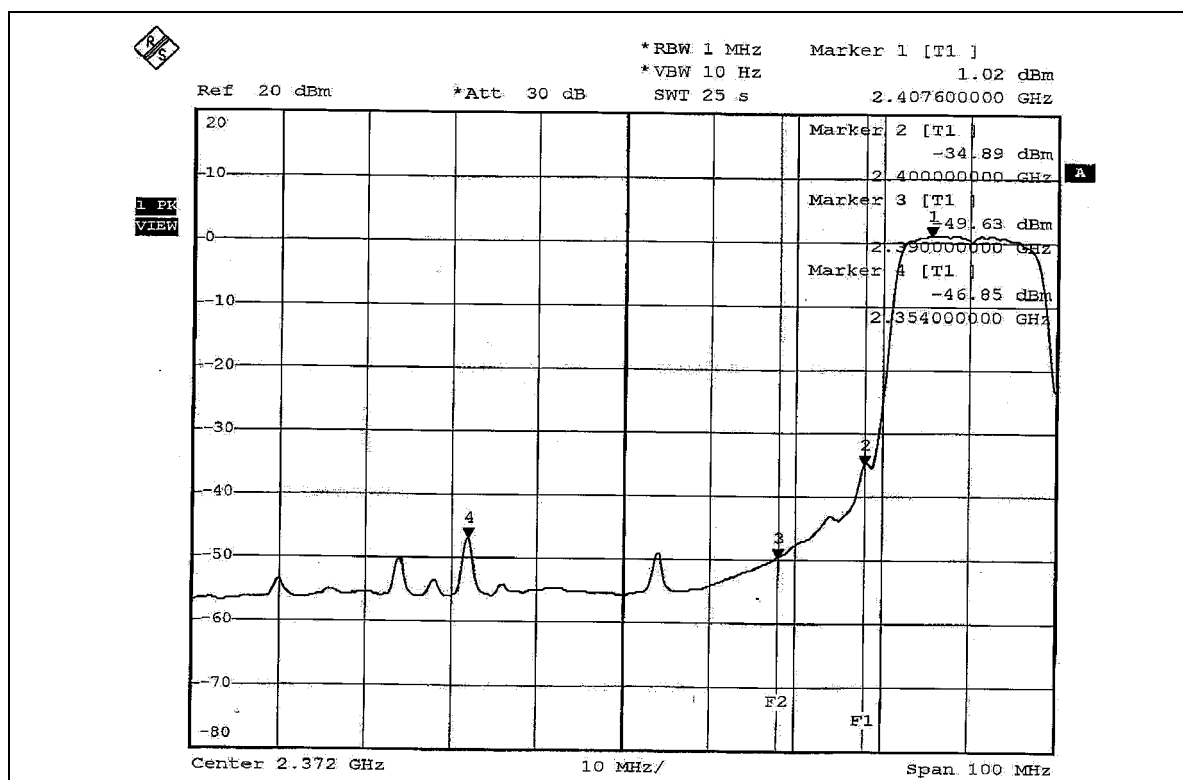
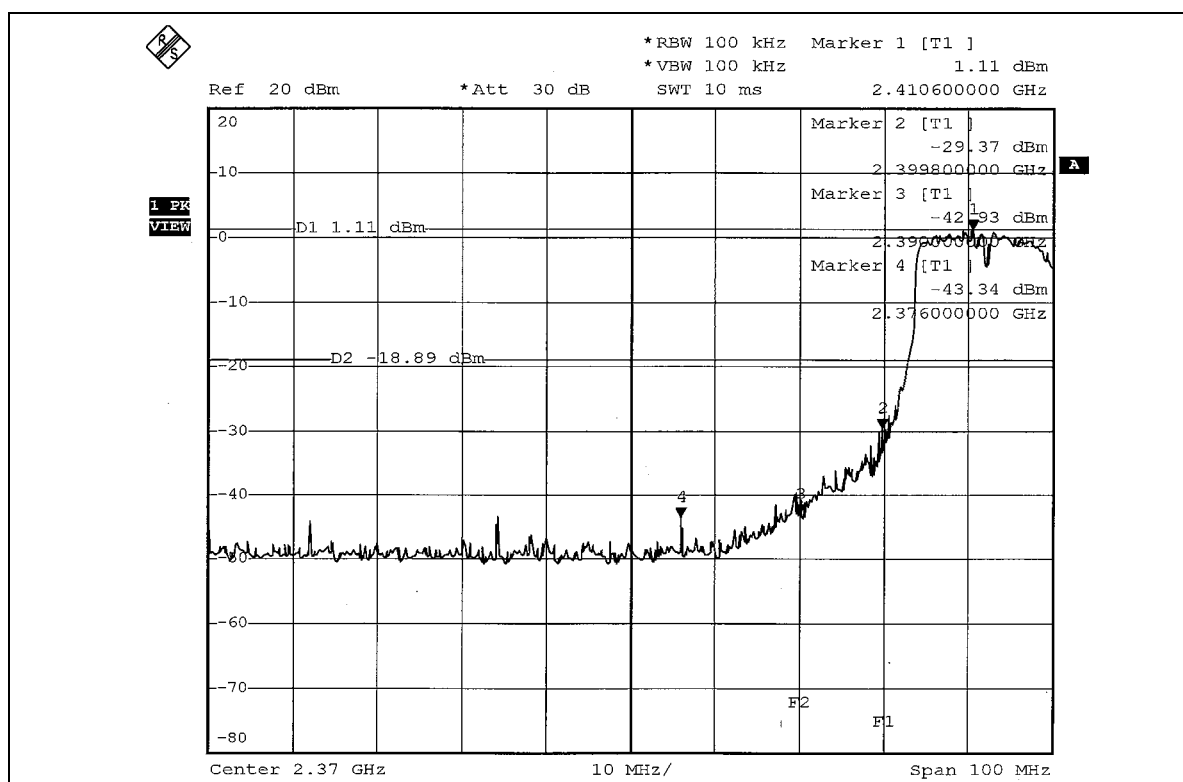
The band edge emission plot on page 60 show 47.87dBc delta between carrier maximum power and local maximum emission in restrict band (2.3540GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.2.7 is 96.05dBuV/m (Average), so the maximum field strength in restrict band is $96.05 - 47.87 = 48.18$ dBuV/m, which is under 54dBuV/m limit.

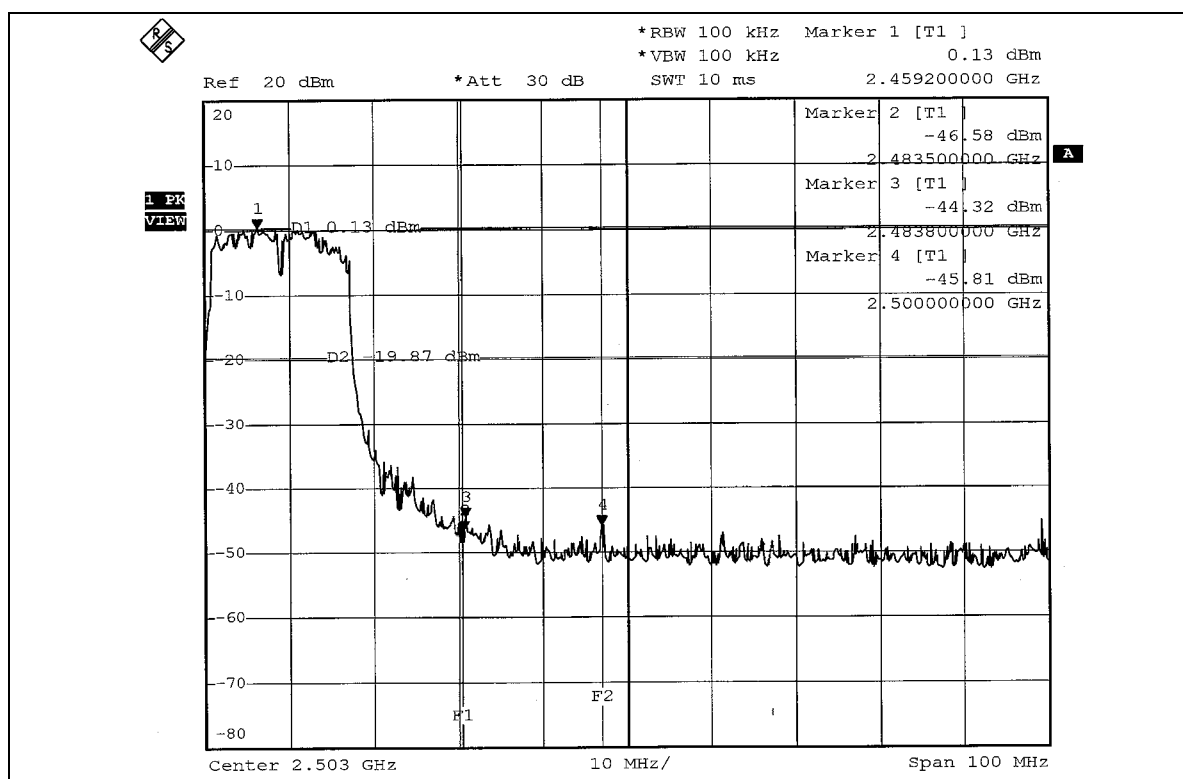
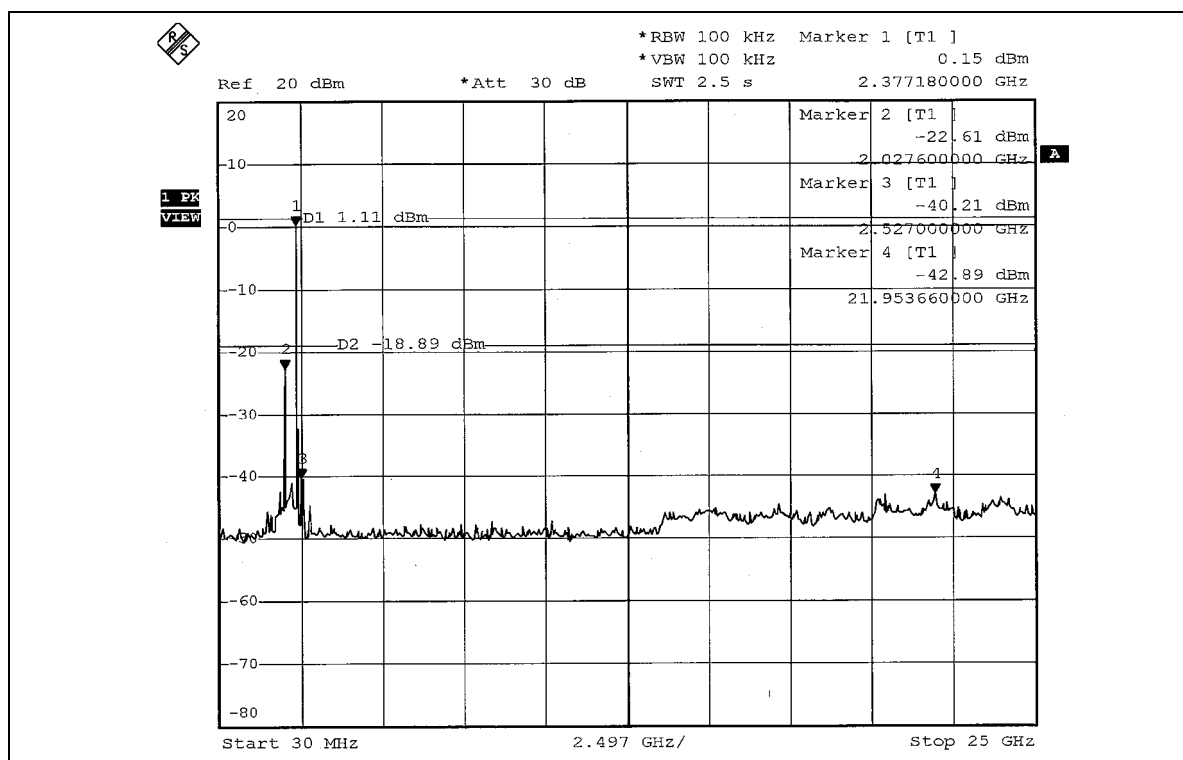
NOTE 2:

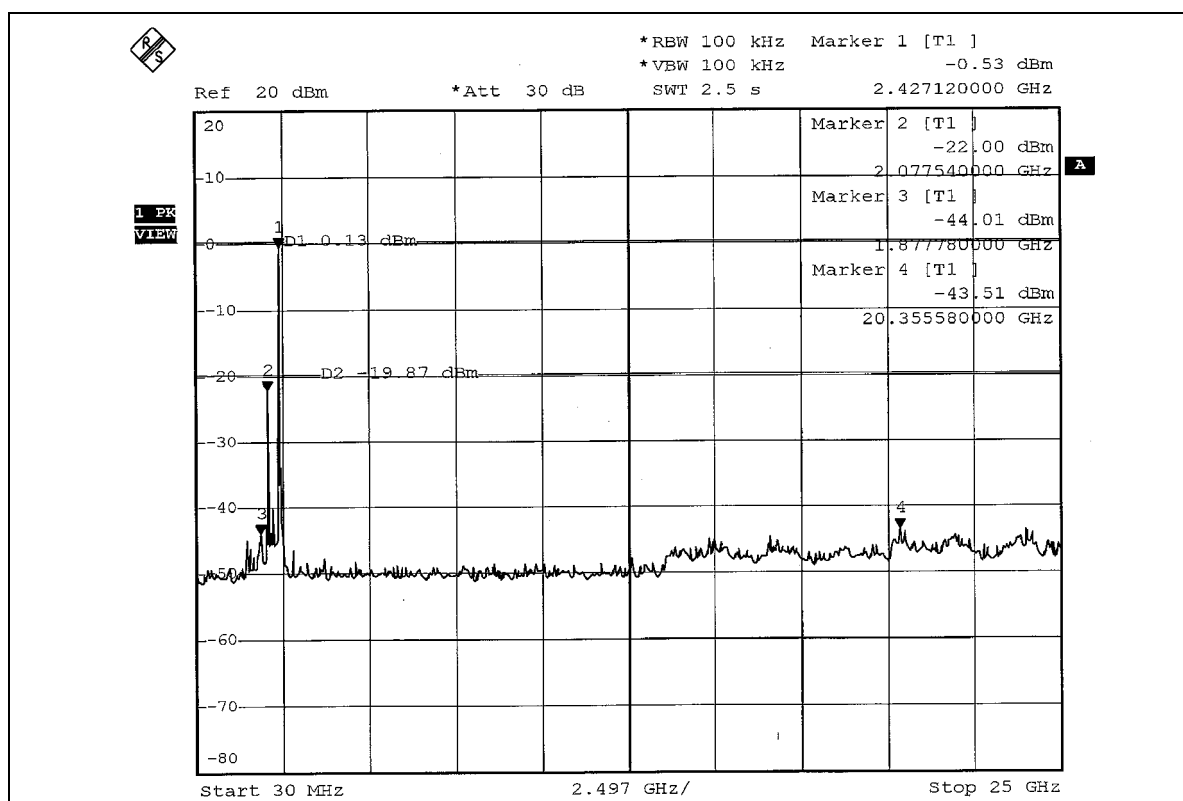
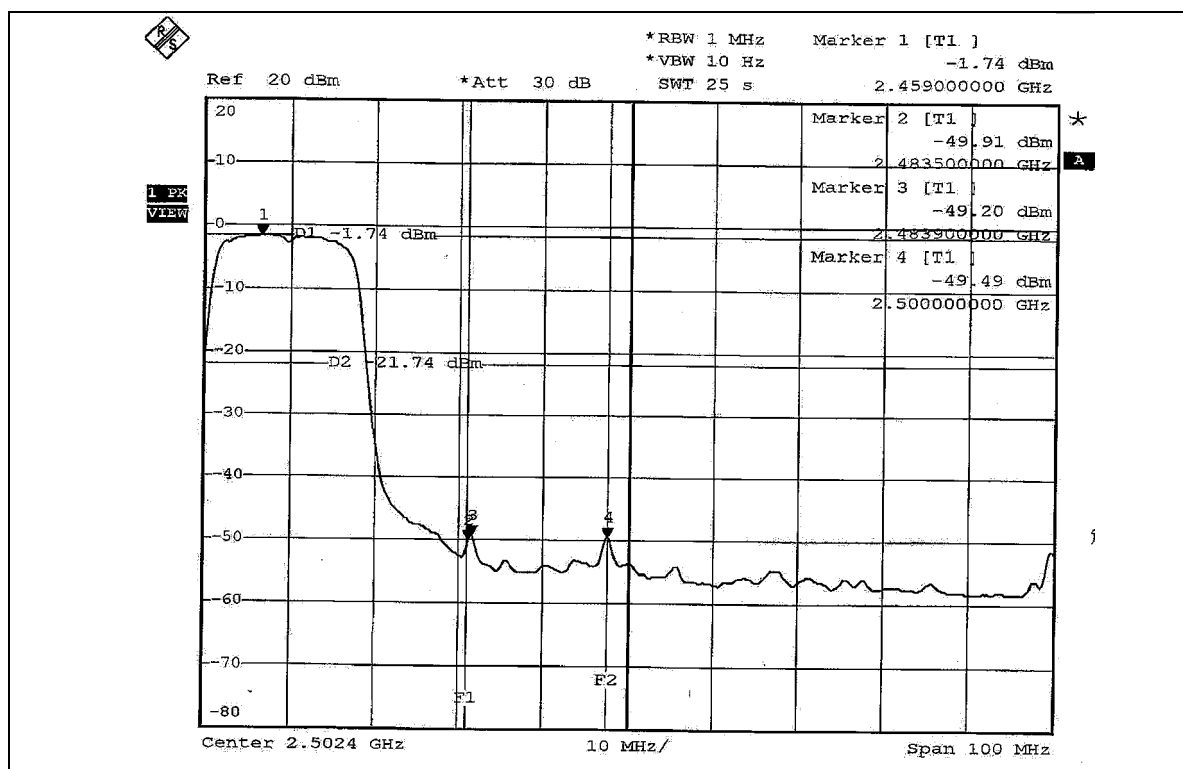
The band edge emission plot on the page 61 show 44.45dBc delta between carrier maximum power and local maximum emission in restrict band (2.4838GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 105.20dBuV/m (Peak), so the maximum field strength in restrict band is $105.20 - 44.45 = 60.75$ dBuV/m, which is under 74dBuV/m limit.

The band edge emission plot on the page 62 show 47.46dBc delta between carrier maximum power and local maximum emission in restrict band (2.4839GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.2.7 is 96.07dBuV/m (Average), so the maximum field strength in restrict band is $96.07 - 47.46 = 48.61$ dBuV/m, which is under 54dBuV/m limit.

*(The test data is in accordance with ADT Report No.: RF930707L05.)







4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

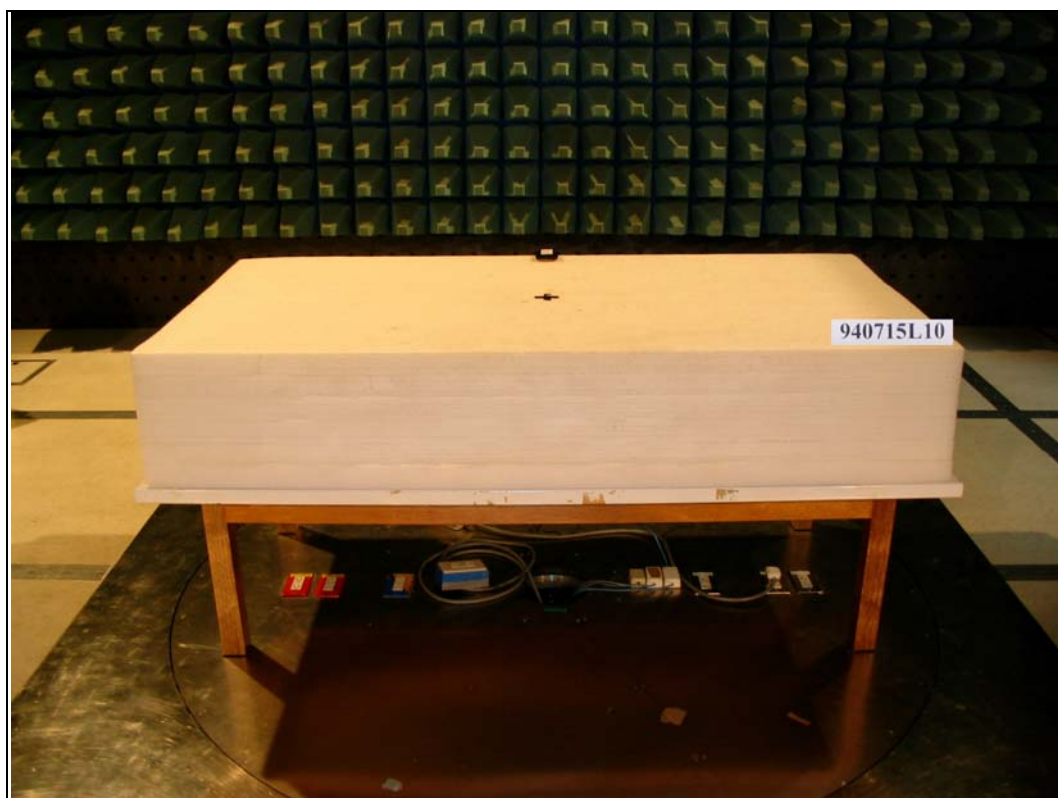
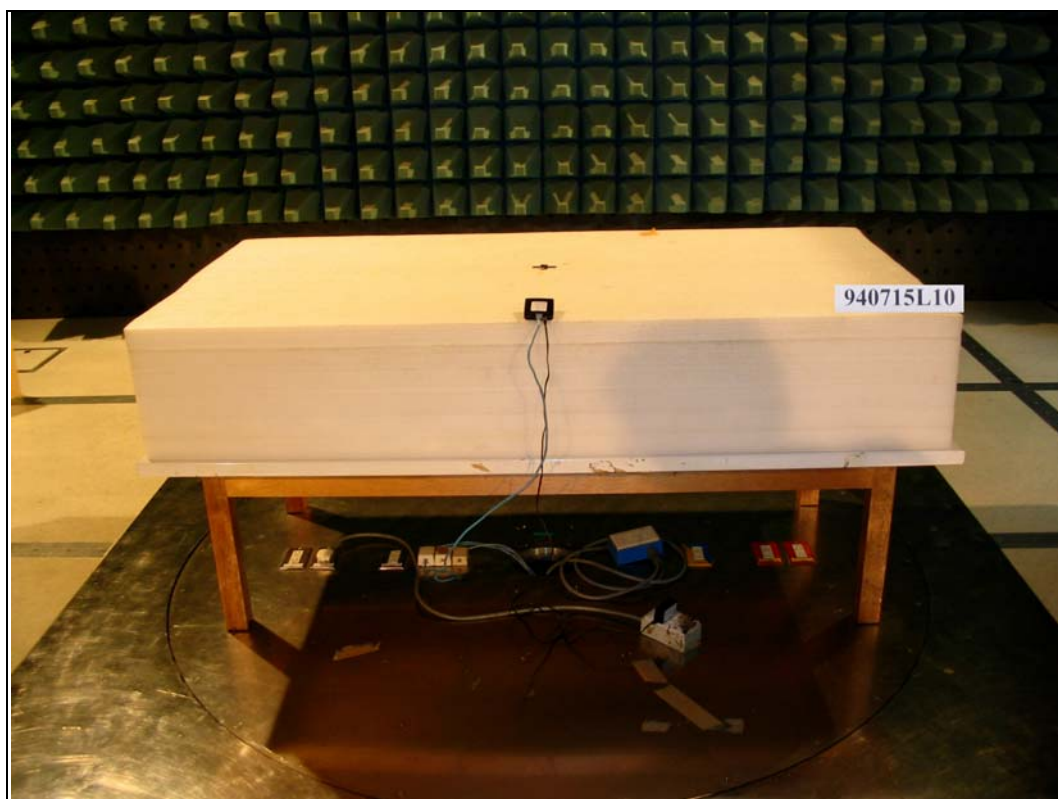
The antenna used in this product is Chip / PIFA antenna without connector. And the maximum Gain of this antenna is 0dBi.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST



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, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	CNLA, BSMI, DGT
Netherlands	Telefication
Singapore	PSB, 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: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

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Fax: 886-3-3185050

Linko RF Lab.

Tel: 886-3-3270910

Fax: 886-3-3270892

Web Site: www.adt.com.tw

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